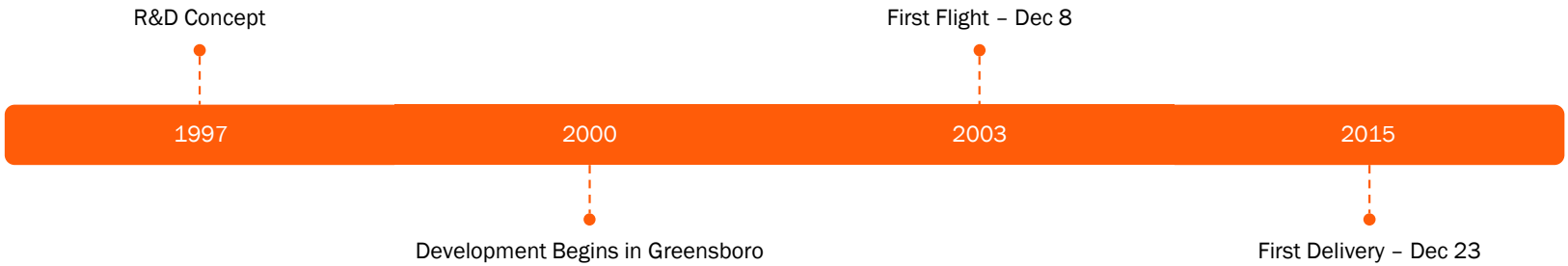
MG HJET HA 420

DEVELOPED BY MARWAN GHARIB

PUBLISHED BY FLIGHTFX


R&D Concept
First Flight – Dec 8
1997
2000
2003
2015
Development Begins in Greensboro
First Delivery – Dec 23

HJet HA420

Introductory Flight
KGSO-KILM

We've just taken delivery of our brand new HJET in a beautiful E2 Flat Black Livery , marveling at its beauty while standing at the delivery area of KGSO.

Friends and family will be waiting for you back home at Wilmington INTL to celebrate the arrival of the new family jet.

It's a Beautiful Sunny Day in KGSO!

Key bindings for controller events can be found here:

HJet Control Bindings v2.0

KGSO

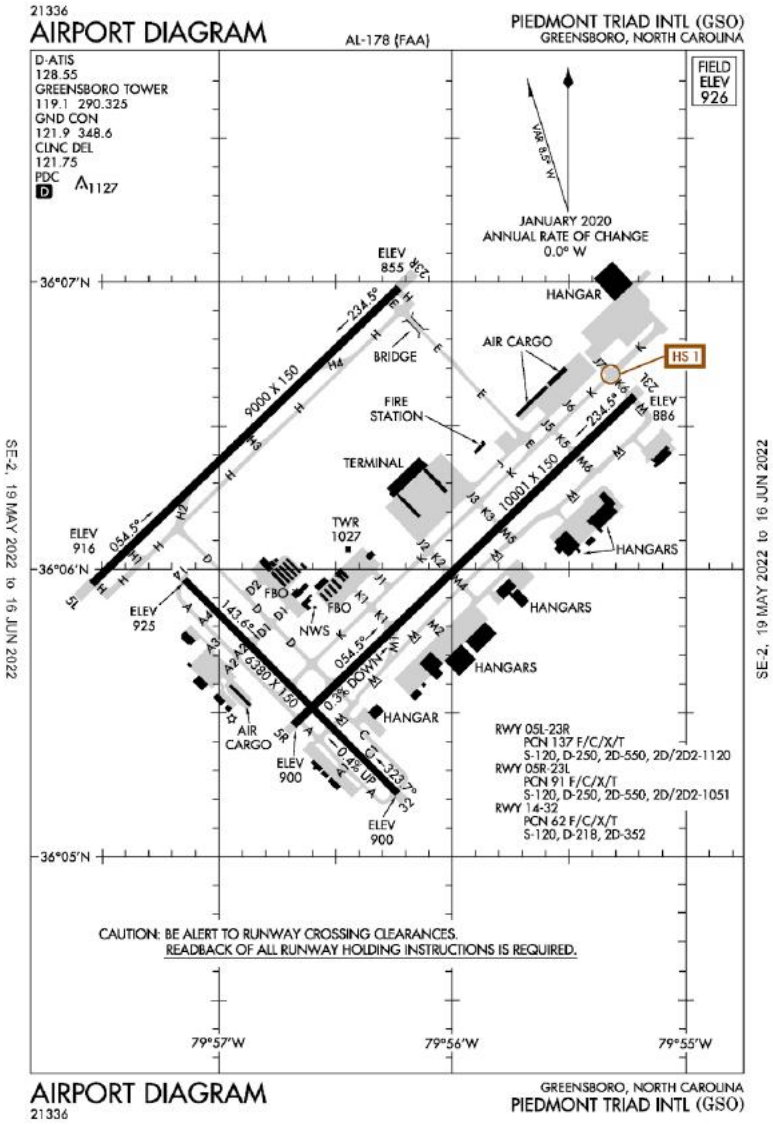
Piedmont Triad International Airport

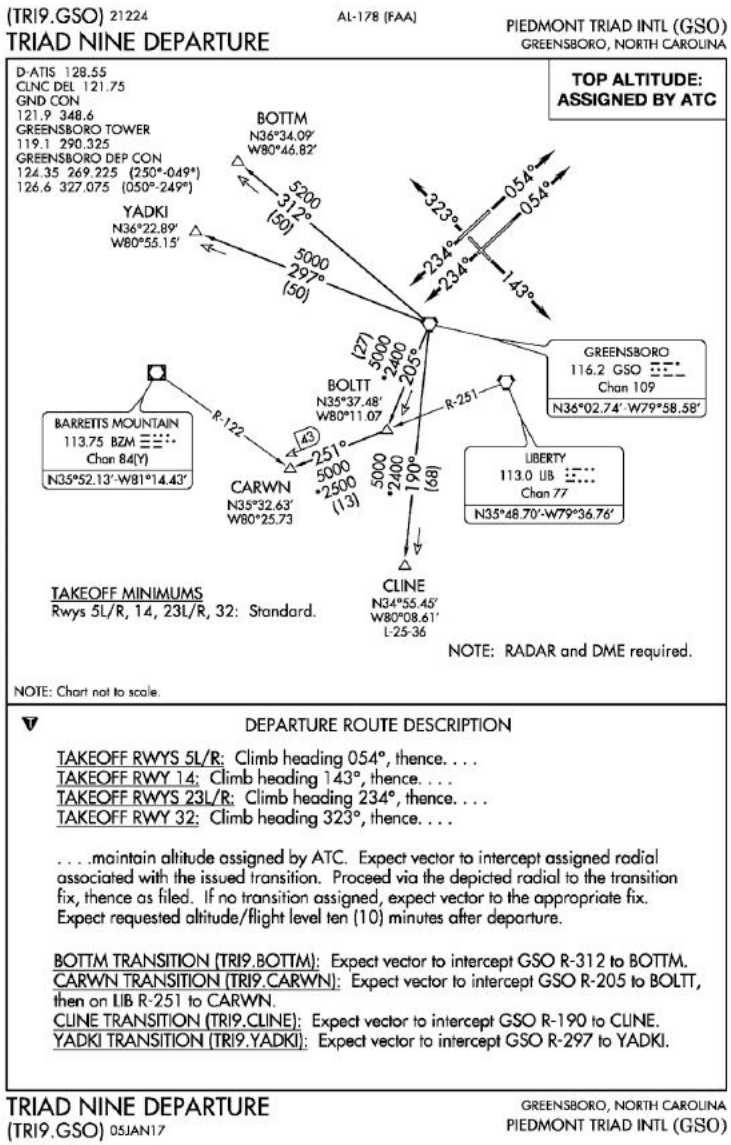
(IATA: GSO, ICAO: KGSO, FAA LID: GSO)

Commonly referred to locally as "PTI“ is an airport located in unincorporated Guilford County, North Carolina, west of Greensboro.

Serving the Piedmont Triad region of Greensboro, High Point and Winston-Salem as well as the entire Piedmont Triad region in North Carolina, United States.

The airport, located just off Bryan Boulevard, sits on a 3,770-acre (1,526 ha) campus and has three runways.





Flight Plan Route

We start by setting up a flight plan , we can do so either through the MSFS world map menu , or the hard way , creating our flight plan through SimBrief.

https://www.simbrief.com/

Our flight plan for today is:

KGSO/23L TRI9 CARWN DCT FAY V296 YOAST DCT KILM/17

We will be Cruising at FL310 or 31,000 Feet (Altimeters set at 29.92)

Departure Chart – TRIAD NINE DEPARTURE

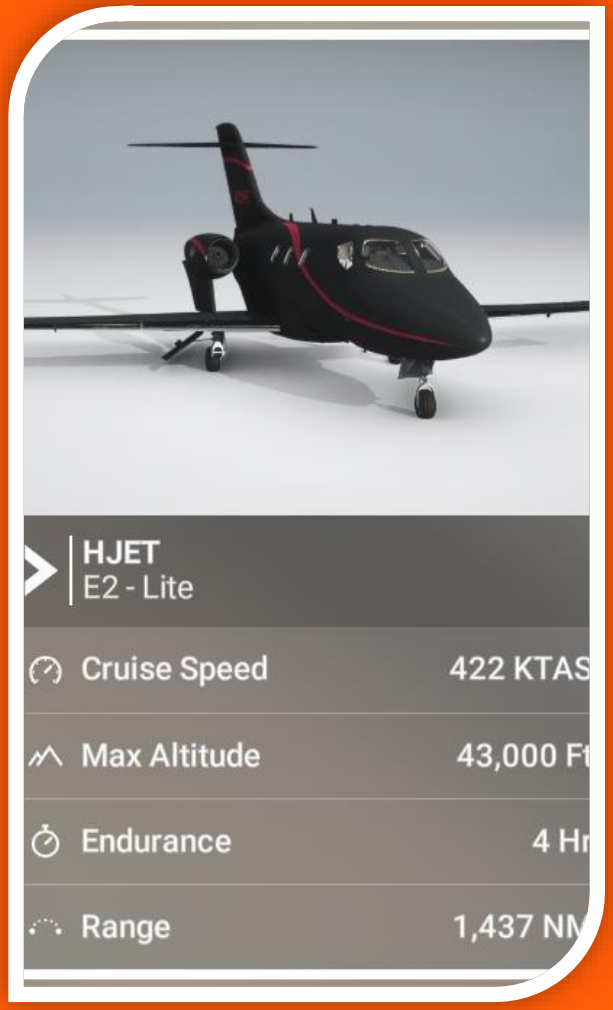
Livery Selection

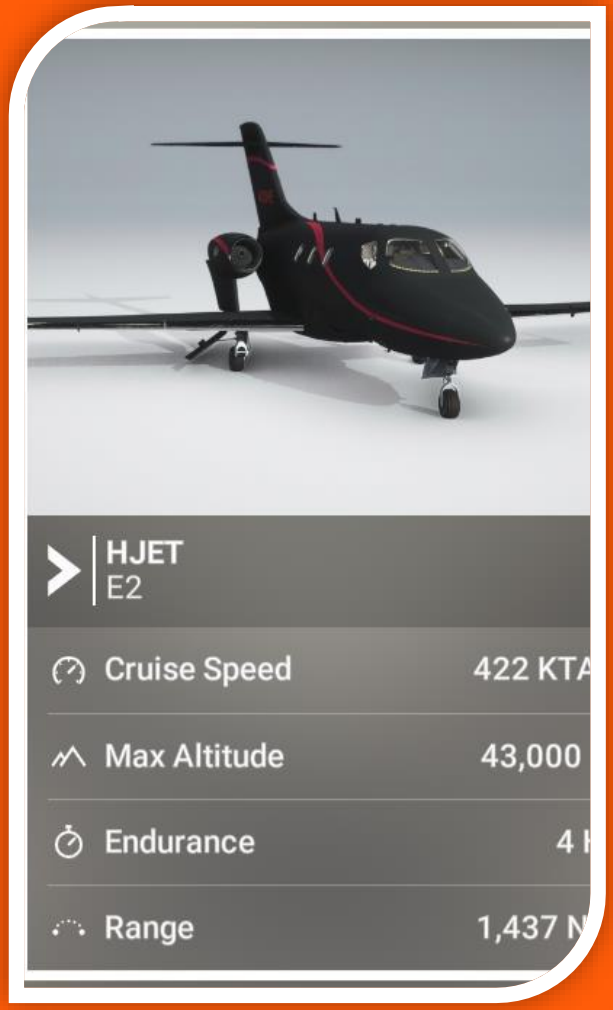
When selecting the Desired Livery take note of the Full Version and Lite Version.

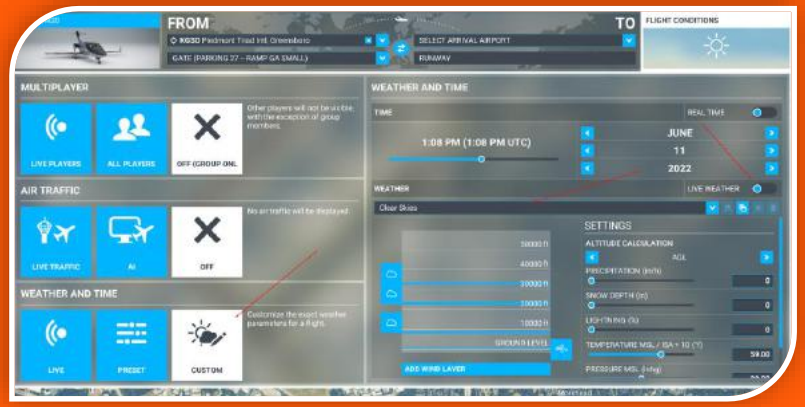
HJet v2 Includes two “variants” of the plane. The Lite version is intended to help with performance by Duplicating the PFD Displays and the GTC Controllers.

This reduces render requirements and is the better selection for lower end PCs.

The RECOMMENDED variant for XBOX users is the Lite Liveries.







Sim Setup

After Selecting your HJet and Livery Search in the bar for KGSO and “zoom” into field Level and select RAMP 27 Parking as the Departure.

We will add nothing else into the world map flight plan as we will be loading the Flight Plan in the G3000 Manually. Once selected for departure set the time to 9am local and then click on flight conditions.

For the Tutorial we will turn Live Weather Off and set the Weather to Clear Skies.

We are also going with Multiplayer and Live Traffic Off so that we can limit distractions or variables that can take you off the tutorial plan.

Once you have flown the tutorial and understand the basics you will be ready to jump back into your preferred settings. Next let’s set a couple parameters in our Clear Skies.

HJet

Sim Setup 2

We are going to look at the Weather section and scroll down to set the Pressure MSL to 30.02.

This way we will have to use the STD Pressure and altimeter settings later in flight.

Sim Setup 3

Now Click on the Wind Icon at Ground level so we can Set Up some wind on the ground to favour our tutorial runways today which are 23L and runway 24. We will give a little offset to it.

Set the wind to come from 270 and a speed of 5 Knots so that we have slight cross and low speed.

Sim Setup 4

Scroll down in the right pane further and set the Gust from 270, speed of 5 Knots and Gust per Minute to 2.

Now Click on the Flight Conditions again to hide the menu

Finally Hit that Fly button in the Lower Right Side!!

Loading Screen….

A fun fact about the HJet and Tom Cruise is that Tom Cruise is an avid pilot, and he purchased a HJet in 2016.

He reportedly received his pilot's license in 1994 and has been flying ever since.

The HJet is known for its innovative design, fuel efficiency, and high performance, and it has received several awards for its design and safety features.

No wonder then that Maverick would look to add this to his “daily driver”….

HJet

Garmin Layout

1. Standby Flight Display (SFD/ESI)
2. Garmin Flight Control (GFC)
3. Primary Flight Display 1 (PFD 1)
4. Engine Indication System (EIS)
5. Multi Function Display (MFD)
6. Primary Flight Display 2 (PFD 2)
7. Garmin Touch Controller 1 (GTC 1)
8. Garmin Touch Controller 2 (GTC 2)

NOTE: With a “Lite Livery” to reduce resource utilization PFD 2 is Duplicated From PFD 1 and GTC2 is Duplicated from GTC1. This reduces the number of virtual displays the HJet requires the sim to render.

Entering The Cockpit

The Philosophy of the HJET reflects the real counterpart, Simplicity and Automation of operations. We will expand on that in a moment, for now let us start by pressing the BATTERY to connect power (1).

The Garmin G3000 will commence it's Bootup Sequence. When complete press the 12th button of the MFD (2) to dismiss the splash screen.

Connecting External Power

Our Large screens consume a lot of energy and will quickly consume the batteries if this is the only power source.

For this , we have a trusty orange ground power unit that will feed the HJET's power needs until the engine generators are on.

GPU is automatically available when :

- GPU Connected in Sim Options Menu
- Engine Generators are offline

When available the "EXTERNAL POWER" Button will light with "AVAIL". Press it to connect external power and status should now turn to "ON" indicating that power is connected.

HJet

Sim Options

Controlling HJet and Simulation Specific Elements. This is not a "real world" Menu. All Settings are persisted to your next flight! How you leave the plane is how you will find it next time!

- Main Door (This Opens the Main Door)
- Rear Cargo Door (This Opens the Aft Cargo Door)
- Front Cargo Door (This Opens the Fwd Cargo Door)
- Static Elements (This will make Eng covers, Pitot Covers and Static covers all Visible)
- Cabin Shades (This will Operate the Tinted Cabin Shades)
- Enable GPU (This will Enable the GPU and External Power)
- Show 3D Pax (If your Load Stations Has a Pax this will make them Visible in the Cabin .. Not the Pilot Stations)
- E2 Mode (This enables the E2 Mode which has a Higher Payload/Fuel for greater range, Auto Deployment of Spoilers when brakes are applied after landing and a full Auto Throttle system with FMS Speed Management)

HJet

Garmin Touch Screen Operation

In the Lite Livery Versions, the Left and Right GTC Controllers are Duplicated. This is to reduce resources rendering twice as much data.

On the Full Livery Versions, the Left and Right GTC are independent. They can control any of the PANE (full or split) on any screen. When Both PFDs and the MFD are Split there is a total of 4 independent Panes.

Following Video explains the GTC Delegation:

https://youtu.be/XzVFrB_rQfo

Full Livery Only:

Left GTC Pane Control Focus is highlighted by the Cyan Bar.

Right GTC Pane Control Focus is highlighted by the Purple Bar.

Left GTC Knobs Control Delegation of the Pane Focus.

Pre-Flight

Time to Get Busy with the Flight Management System and Prepare the Flight!

The Garmin G3000 is an advanced flight system. In some ways it offers a more extensive feature set then many airliners!

HJet

Step One: Load Manager

Once power is connected to the aircraft, you will be greeted with the SIM OPTIONS – LOAD MANAGER PAGE on the GTC (in Full Livery will be the RIGHT unit). From the HOME Menu select Aircraft Systems

Press on a passenger icon to toggle passenger, enabled (Green) or disabled (Gray)

Press on any of the cargo compartments indicator to adjust their weights.

Use the buttons labeled +/- 100 or +/- 500 to adjust the fuel level

NOTE: All Values entered into the Load Manager will overwrite the sim W&B however due to limitations of the Sim the Menu for Weights will not Update to reflect these changes.

Add to the Load Manager:

We'll go with a pilot, copilot , and 25% cargo .

Zero to fuel weight is 7720 Lbs. and we will load 1800 Lbs. of fuel.

When Complete Press the "Go To Initialization" Button

HJet

Step Two: Initialization

HOME > Utilities > Initialization

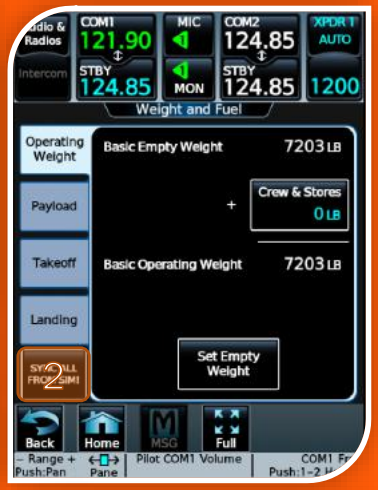
In this page, we will do the system tests, set up the aircraft's weight and fuel and set our speed bugs.

Press "System Tests" to enter the System Tests page , where we will be performing 3 tests:

- Fire Detection
- Stall protection
- Switch illumination

You can do each test individually, by pressing each respective test button , or just simply click the "Preflight" button which will sequence through all tests. You will see tests labeled "In progress" and once completed they will be labeled "Done"

Now Press the "Back" Button to Return to Initialization



Step Two: Initialization 2

We now press to “Weight and Fuel” to initialize the aircraft’s loads,

There are multiple tabs in this page where pilot is expected to enter the weights of the following:

- Operating Weight: Crew and stores (pilot weights and any additional constant loads on the aircrafts)
- Payload: Passenger counts and average weight of each , Cargo weight
- Fuel: Fuel on board
- Takeoff : estimated taxi fuel

TIP: You can enter each Tab manually OR you can press the shortcut button “SYNC ALL FROM SIM!” and the fields on all Tabs will be automatically populated based on the information from the “Load Manager”

After all fields are populated Press the “Back” Button to go to Initialization Page.

HJet

Step Two: Initialization 3

On this page, You can enter the V-speed corresponding to V1,VR, V2 and Vfto .

Once entered, you can turn each on individually or simply press “All On” to display all on the PFD.

- V1: The speed beyond which takeoff should no longer be aborted.
- Vr: The Rotation speed for the current aircraft configuration.
- V2: Takeoff safety speed. The speed at which the aircraft may safely climb with one engine inoperative
- Vfto: This is the final takeoff speed, or the speed at takeoff necessary for the plane to climb and maneuver as designed.

TIP: You can enter each field manually OR you can press “Get from Sim” and the V Speeds will be populated from internal look up tables.

That concludes the initialization phase.. Press Back Button and Then Accept Initialization!

Step Three: Flight Plan Entry

Our flight plan is KGSO/23L TRI9 CARWN DCT FAY V296 YOAST DCT KILM/17

- Press “Flight Plan”
- “ADD ORIGIN” enter “KGSO” and “ADD DESTINATION” enter “KILM”
- Press “PROC” Button on the Left. Select Departure and Select the TRI9 SID (Standard Instrument Departure) from Runway 23L with Transition “CARWN”
- You can preview the departure on the MFD by pressing the “Preview” button and then ”Show” on map

HJet

Step Three:
Flight Plan Entry 2

Once satisfied, we can turn Preview off by again pressing “Preview” > ”OFF”

Satisfied with the chosen Departure (SID), press “load” to load in all that hard work, The departure procedure is now loaded.

Up next ie enroute waypoint FAY , press “Add Enroute Waypoint” and enter “F”, “A“, “Y”, then “ENTER”

Step Three: Flight Plan Entry 3

Continuing with the Flight Plan to waypoint YOAST from FAY via the V296 Airway

- To add the airway , press the entry waypoint “FAY” then “Load Airway”
- When the Airway menu opens “ENTRY” is automatically selected as “FAY”. Available Airways are on the right from this Entry. Select the ”V296”
- The “EXIT” Should Prompt you to select from a List on the Right. Choose the exit point “YOAST” then press “Load Airway” .. this will take us back to the flight plan page with the airway added

That concludes the flight plan section for now. Later during cruise, we will set up the descent and approach.

HJet

Step Four: Autopilot Setup

With this Departure we will “simulate” that KGSO Clearance Delivery has issued us our IFR Clearance as filed and with an unrestricted climb all the way up to our filed Altitude of FL310.

The TRIAD NINE DEPARTURE (see appendix for copies of the Charts) for Runway 23L is the Following

- Take Off Runway 23L and climb heading or 234 deg
- Normally ATC Provides Radar Vectors to the GSO VOR
- Resuming FMS Navigation from GSO to BOLTT then CARWN

The GFC panel at the top middle of the Glareshield is what the pilot uses to enter the commands for the Automation system. All Modes and Information is found on the PFD in the Annunciator or FMA region. For more detailed information see the Garmin G3000 Pilot's Handbook:

https://static.garmin.com/pumac/190-02047-02_a.pdf

We are ready to start the engines , but first let’s go through our checklist

1. With the HDG SEL Knob set the Cyan Blue HDG Bug on the top left of the HSI to 234 deg
2. With the ALT SEL Knob set the ALT Cyan Blue ALT Bug On Top of the Alt Tape to 31,000 (long time)
3. With the SPD SEL Knob set the SPD Mode to FMS and Ensure the SPD Bug is Magenta 150 KIAS

Checklist Operation

Utilizing the Garmin G3000 Integrated Checklists this section will take the Hjet from Parking to Take Off and all the way to the Flight Levels.

Just like in the real plane pilots can take full control of the checklist system from the yokes or GTC controllers

Checklists help monitor the flows and backup the pilot.

Single Pilot IFR can be task saturating. Leverage this feature to ensure you don't miss an important step in your process!

HJet

The Checklist

You can access the checklist through one of two ways:

- GTC > Home > Checklist
- Pressing the thumb wheel on the pilot yoke. Pressing this will open the Checklist to the GTC Pane that is Cyan.

Tip: Pressing the thumbwheel for 2 seconds will hide the checklist and take you back to the previous Page that was on the Cyan Pane.

Using the checklist:

You can scroll through the checklist by one of three ways:

1. Scrolling the Thumbwheel on the Pilot Yoke
2. Scroll the GTC Left Joystick knob
3. Keybindings (See Bindings Doc)

HJet Control Bindings v2.0

To acknowledge an item , you can do it in one of three ways:

1. Press the Thumbwheel on Pilot Yoke
2. Press the GTC Left Joystick Knob
3. Keybindings (See Bindings Doc)

Choosing a checklist:

- Both GTCs will allow you to select a checklist for any phase of flight , pressing any of the checklists buttons will display this checklist on the Associated GTC Control Pane
- OR if acknowledging all items on a checklist; the cursor jumps to “go to next checklist” which when pressed will take you to the next checklist in the sequence.

Tip: The cockpit philosophy is that all buttons are either dark or NORM . The HJet employs a sophisticated Automation system to aide the Single pilot operation. NORM is effectively “AUTO” for systems that will operate based on phase of flight.

HJet

CHECKLIST

Normal

BEFORE STARTING ENGINES

☐BATTERY.....ON
☐OXYGEN.....Checked, ON and NORM
☐PRESSURIZATION.....(NORM)
☐ELECTRICAL.....ON and NORM
☐ELT.....NORM
☐NOSE WHEEL STEERING.....NORM
☐LANDING GEAR.....DN
☐ALTERNATE GEAR RELEASE HANDLE .....
.....Stowed (fully in)
☐PARKING BRAKE.....Set
☐FLAPS.....UP
☐THRUST LEVERS.....CUT OFF
☐SPEEDBRAKE (if installed).....RET
☐ICE PROTECTION.....NORM and OFF
☐FUEL PANEL.....(NORM)
☐TRIM PANEL .....Checked, set and NORM
☐WINDSHIELD HEAT Panel.....NORM
☐PNEUMATIC PANEL.....(NORM)
☐GLARESHIELD PANEL.....(dark)
☐CHIME.....Normal (dark)
☐AVIONICS INITIALISATION ....(Complete)

CHECKLIST NOT FINISHED GO TO NEXT CHECKLIST?

Before Starting Engine

The Above Layout with Diagram will help you move through the Checklist Flow!

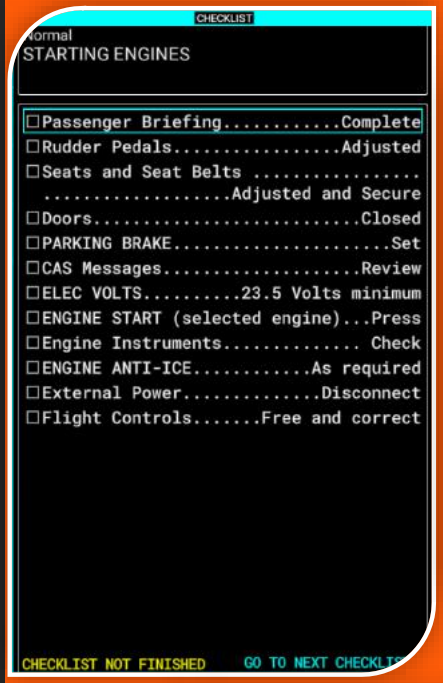
Click off each item as you go!

HJet

Starting Engines

1. Doors: Can be controlled from either GTC: >Home>Aircraft Systems > Sim Options > Sim Options TAB
2. CAS Messages: we should be seeing only engine related warnings on the PFD. If there is an “ECS TEMP CONTROL MANUAL” message. Navigate on either GTC: >Home>Aircraft Systems > System Controls> Thermostat. Make sure to set both Cockpit and Cabin to Auto!
3. Electric Volts: Can be accessed from either GTC: >Home>Aircraft Systems > Electrical > Look on Associated PFD or MFD Pane.

   You should now see electrical synoptics; verify battery voltage is above 23.5 Volts



Starting Engines 2

We'll start with the right engine #2:

1. Press the right engine START button, it should light green.
2. Click below the throttle lever of engine #2. This will move it from the CUT OFF detent to the IDLE detent
3. Monitor the EIS during engine startup, the FADEC will do all the work to ensure the startup parameters are not exceeded you should see STARTER then IGN , and throttle mode START in cyan
4. It takes 20 seconds for an engine to start (It is that fast!) , then to idle at around 23% N1 and 52% N2
5. Repeat the same for engine #1

After visually checking the flight controls , we now proceed to the before taxi checklist.

NOTE 1: While the Throttle is in Cut off position , external hardware will not be able to control the throttles and you will see no effect trying to move the throttles with either keyboard or joystick , you must take it out of Cut off position via the Click Spot.

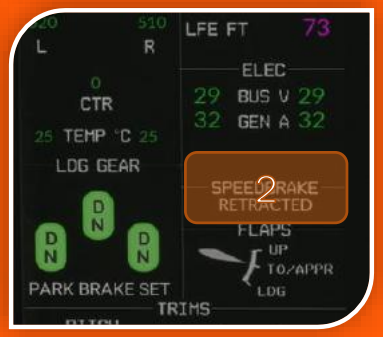
NOTE2:If you try the MSFS quick start shortcut Ctrl+E while the engines are in idle , this will introduce a conflict and you will see flickering as the engines are trying to start but being cut off immediately, you must move the throttles to the IDLE detent.

Note 3: Once engines are running , generators will automatically come on , this will disconnect the simulated GPU

HJet

Before Taxi

1. Transponder Code. Enter and Confirm Auto Mode Set On the GTC
2. Flight ID is On the PFD above the Altitude Tape
3. Set Navigation Source to FMS Using the Softkey below the display
4. Altimeters Set 30.02 on Standby and PFDs (Note even in the separate PFD Liveries both PFD Altimeters are Linked)
5. Flaps Set for Take Off and Verify on the EIS



Before Taxi 2

1. Speedbrake – Set to EXT and Verify on EIS
2. Speedbrake – Set to RET and Verify on EIS
3. Cabin Signs: Can be controlled from either GTC: >Home>Aircraft Systems > System Controls > Interior Lights
4. Parking Brake Release

The Before Taxi Checklist is now Complete

HJet

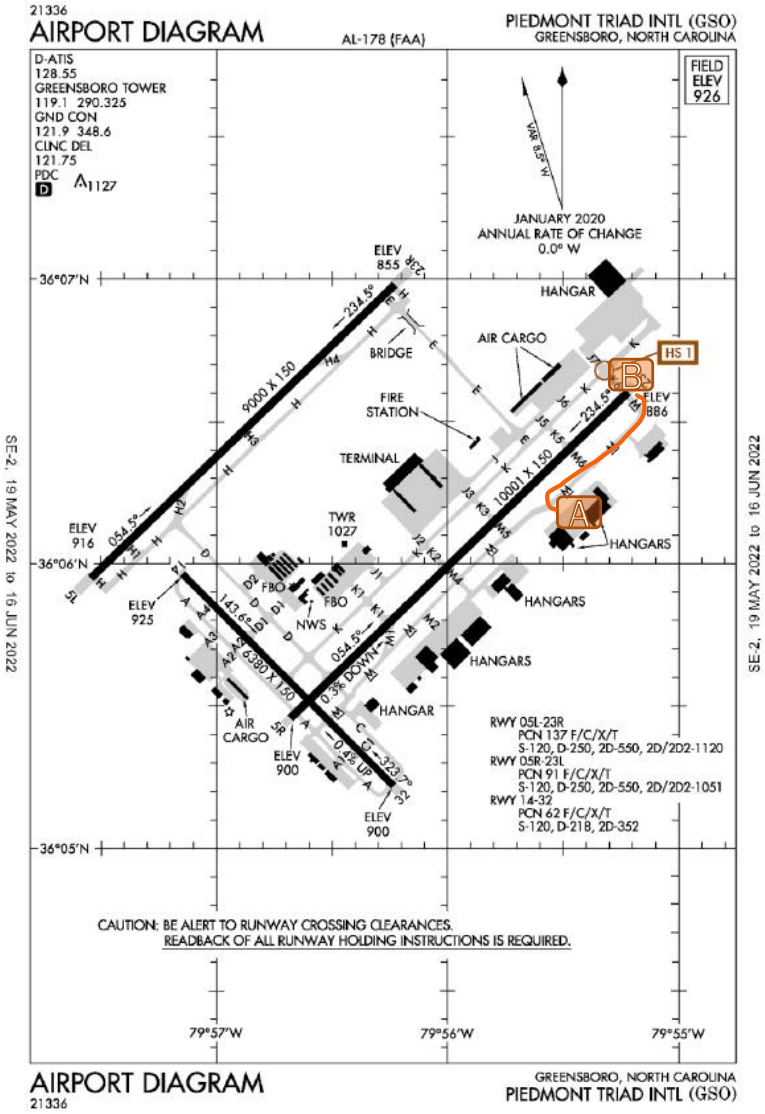
Taxi

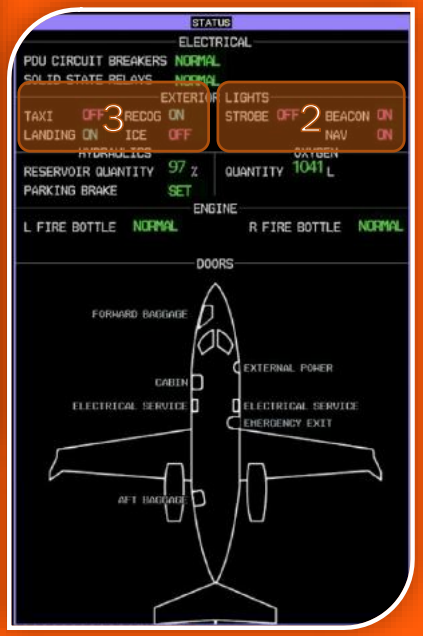
Departing runway 23L via Taxiway Mike , short and convenient (A to B on Chart)

The taxi checklist is a rather short one:

1. Start moving by advancing the throttles then apply Brakes
2. Continue taxi and check the Nose wheel steering is on and working.
3. Check Flight instruments to see that they are correct -- turning Movement on the HSI HDG and the Slip Indicator is moving.

Note: Brake out N1 on the real jet is around 30~35% N1 depending on the weight , you will need 40% for the simulated version





Automatic activation conditions (Sim specific):

- **Taxi lights:**
  - When on ground and ground speed is more than 5 kts
- **Landing lights:**
  - When on ground and on any runway , or throttle above 70% or speed more that 35 kts
  - When airborne and gear is down
- **Recognition lights:**
  - If airborne altitude is less than 18000 ft
- **Ice inspection:**
  - If in icing conditions
- **Strobe:**
  - When on ground and on any runway , or throttle above 70% or speed more that 35 kts
  - When airborne and gear is down
- **Navigation:**
  - When power is established
- **Beacon:**
  - At Least one Engine is running
- **Logo:**
  - When power is established, and alt is less than 18000 ft

Exterior Lights

You'll notice that till now we haven't spoken about lighting , even though we already started the engines and already started taxing .

A beautifully convenient system on the HJET is the automatic lighting system , where the aircraft will manage the lighting for you according to a predefined set of rules..

1. To Access External Lighting from either GTC: >Home>Aircraft Systems > System Controls > Exterior Lights
2. Any Light in "NORM" will be managed automatically by the HJet and will display current state in MAGENTA on the Synoptics Status Page
3. Any Light in "ON" or "OFF" will be in manual mode and will display current state in CYAN on the Synoptics Status Page

HJet

Before Takeoff

1. Flaps Set (TO/APPR)
2. Trims Set (Triangles Green – 4.0)
3. Speedbrake (RET)
4. CAS Messages (Review)
5. Navigation (FMS Set)
6. Flight Guidance (TOGA)
7. TOLD Data (Confirmed)
8. Takeoff Briefing (Complete)

Critical Items

- Trims (2): Take off is very sensitive to trim , and a prerequisite to a successful take off is trimming the elevator to the green band; the indicator triangles will also turn green to signal you are in the correct trim range. The range changes based on the configured flaps..
- Flight Guidance (6): Press the TO/GA button to Set the Flight director to TO/GA (Take off / Go around mode) , this will fix the flight director at 11 degrees pitch up and straight ahead green TO will show on both vertical and horizontal autopilot annunciator on the PFD. Place the White “V” into the Magenta “V” on Rotation. Also Verify that Altitude Preselector is 31,000 FT, HDG Bug is 234 and Speed Bug is 150 and Magenta for FMS Speed Mode.

Before Takeoff 2

1. ICE Protection: If in icing conditions , turn on engine anti ice , otherwise leave it set to OFF. This is one of the few Systems in the HJet that is not Automated and has no “NORM” mode.
   Note: that the CAS system will prompt you if ice is detected.
2. Radar: To turn on weather radar from either GTC:
   > Home > Weather > Weather Selection > WX RADAR > WX RADAR Settings > Radar On

Now it is time to finally take to the skies !

HJet

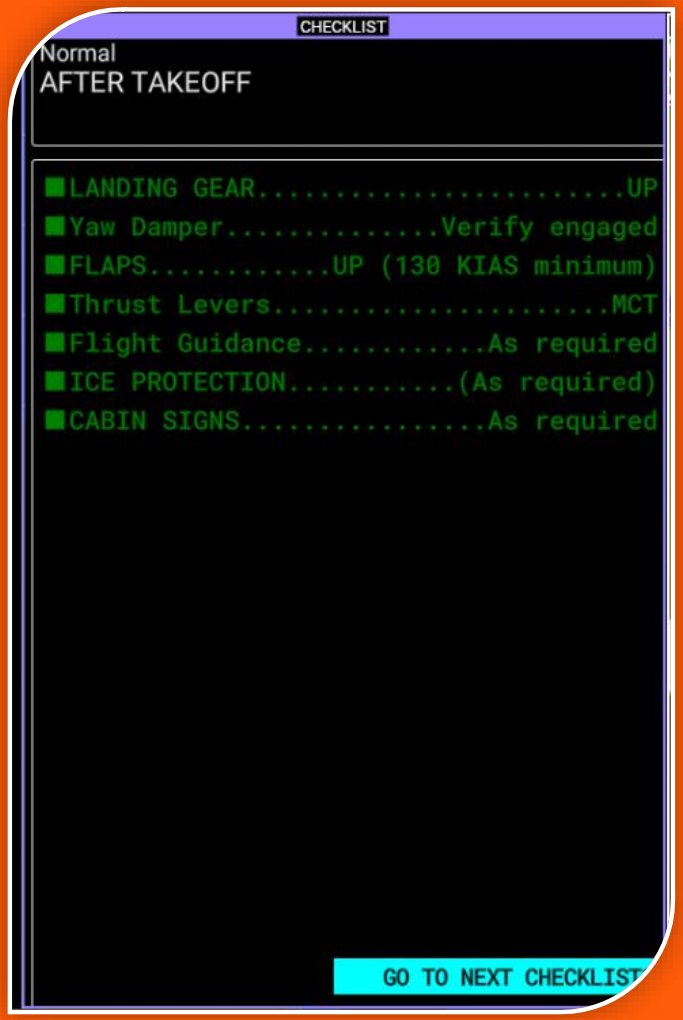
Takeoff

- Push the toe brakes in,
- Push the throttles to the T/O detent, the FADEC will calculate and apply maximum take off thrust. Release brakes, watch engine parameter during acceleration run, remove your hand from throttle once past V1 speed.
    1. NOTE: E2 Mode and Auto Throttle. After setting TO Thrust Manually “Arming” of the AT (Auto Throttle) on the GFC Panel will result in the AT system activating and the Magenta speeds will be respected.
- Start rotating at 113 kts our Vr speed, slowly rising to meet the flight director at 11 degrees pitch in 3~4 seconds. This will maintain around 150 kts.
- Tap the Brakes and Retract the gear after achieving a positive rate of climb.
- Verify YD is Engaged (Press YD on GFC - 2)
- When clear of obstacles and at no less than 130 KIAS retract the flaps. Confirm the gear and flaps are retracted on the EIS.
- Retard the thrust levers to MCT detent Once you pass 2500 ft MSL (1500 ft AGL) and lower the pitch to accelerate towards the climb speed of 210 kts.
    A. NOTE: E2 Mode and Auto Throttle. When AT is Armed reduction to MCT will be Managed by the Hjet. Speed Restrictions will also be maintained when FMS SPD SEL Mode is set.

Tip: Takeoff happens quick in the HJet, this departure has a MANSEQ Leg. Initially fly runway heading of 234. ATC would VECTOR (assign a heading to fly) to either GSO or an “Intercept” VECTOR beyond GSO which intercepts the leg GSO to BOLTT.

Takeoff 2

1. Engage Flight level change (FLC) and set speed bug to 210kts (1.1)
   - NOTE E2 MODE : Auto throttle and FMS Speed Sel Mode (1.1) will automatically follow the Climb / Cruise / Descent Schedules and maintain all speed restrictions. As there are no Altitude Constraints on this Departure there is no need for VNAV Climb.
2. Engage Autopilot (AP). Flying in “TO” Lateral Mode will maintain the wings level attitude
3. Select HDG Mode and Dial a Left Turn of 210 to intercept GSO (3.1)
4. GTC > FPLN Page. Select the GSO Waypoint and then press Direct To (D->)(4.1) followed by “Activate D ->” (4.2) . The G3000 FMC will now plot a direct path to GSO and “UNSUSPEND” (4.3) the sequencing.
5. Select NAV mode to track the flight plan. The HJet will pitch to hold 210kts on its way to our cruising altitude of 31,000 ft.
   - NOTE for E2 Mode and Auto Throttle: When AT is Armed the selecting of FLC will direct the AT to maintain MCT and a speed of 210Kts.



Takeoff 3

Autopilot engaged - EIS Verified – Run the After Takeoff Checklist

- Landing Gear Confirmed Up
- Yaw Damper is Engaged
- Thrust Levers are in MCT (AT verify A/T Mode in CYAN)
- Flight Guidance (FMS / FLC MODES and AP Green)
- Ice Protection (OFF)
- Cabin Signs (As Required)

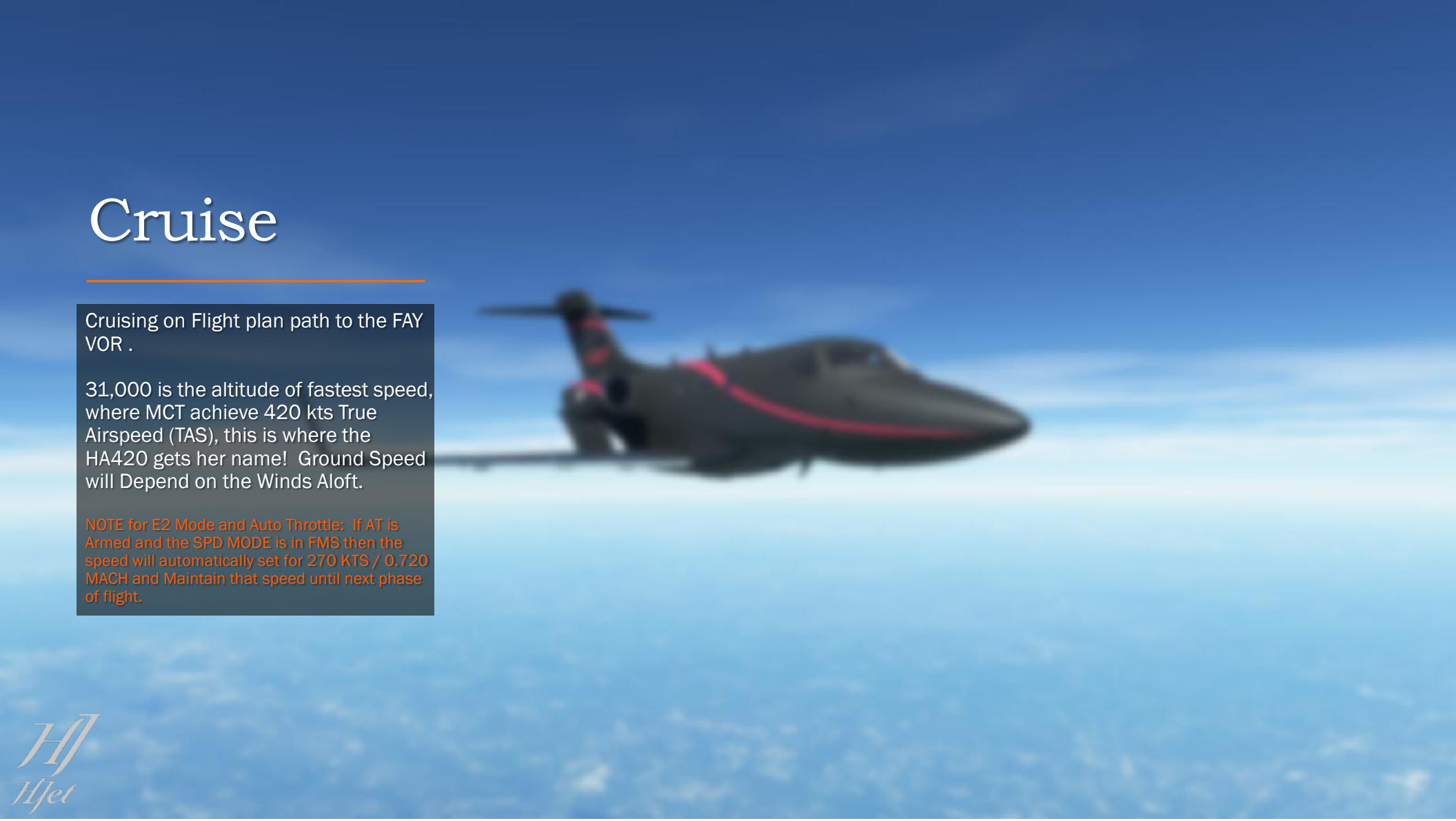
HJet

Climb

1. Monitor the pressurization system, cabin altitude and watch for any CAS warnings,
2. Passing transition altitude (18,000ft) : Press pilot “BARO” knob setting “STD BARO”. Manually Adjust the STBY to altimeter setting 29.92 InHG
3. Climbing at 210 KIAS until Mach speed reaches 0.57M. You can monitor your TAS on the bottom of the Speed Tape. As MACH increases the TAS display will automatically flip to show MACH speed.
4. Once 0.57M is reached switch over to Mach Mode should be Automatic. Manual operation is performed by pushing in the “SPD” knob once. The speed bug should change to MACH set to 0.57M. The HJet can maintain this climb profile all the way to the service ceiling of 43,000 ft.
5. Reaching Cruise ALT of FL310 the FMS Speed will switch to .72MACH

Note: The IAS/MACH transition usually happens at around 31,000 ft. MACH switch over may not be required for this flight. Approaching the cruising altitude of 31,000 ft on a 210 Kts profile verify correct mode.

Cruise



Cruising on Flight plan path to the FAY VOR .

31,000 is the altitude of fastest speed, where MCT achieve 420 kts True Airspeed (TAS), this is where the HA420 gets her name! Ground Speed will Depend on the Winds Aloft.

NOTE for E2 Mode and Auto Throttle: If AT is Armed and the SPD MODE is in FMS then the speed will automatically set for 270 KTS / 0.720 MACH and Maintain that speed until next phase of flight.

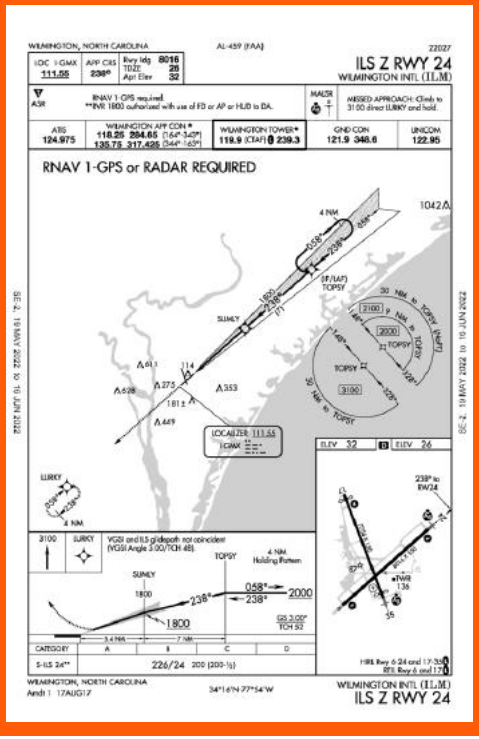
VNAV Descent

Time to set up VNAV and patiently watch for the TOD point, but first we setup our approach into KILM,

We will use the ILS RWY 24

To set approach: On either GTC:

1. Home > Flight Plan > Proc
2. > Approach > Choose Approach > ILS 24 Z
3. Select transition TOPSY, Enter Minimums 226 FT Baro Press LOAD.
4. Warning About an ILS not approved for GPS. This is not an issue. The G3000 Will fly the plan all the way to the Intermediary Fix where it will auto switch to the ILS Frequency and Switch the NAV Source to ILS on NAV 1. Click OK.



VNAV Descent 2

Back on the Flight Plan Page with the Approach Section Filled in. Review the Chart to compare the following:

- TOPSY Has a Constraint – ABOVE 2000.
- TOPSY is a HOLD In Lieu of Procedure Turn.
- SUMLY is the FAF with a Constraint – ABOVE 1800

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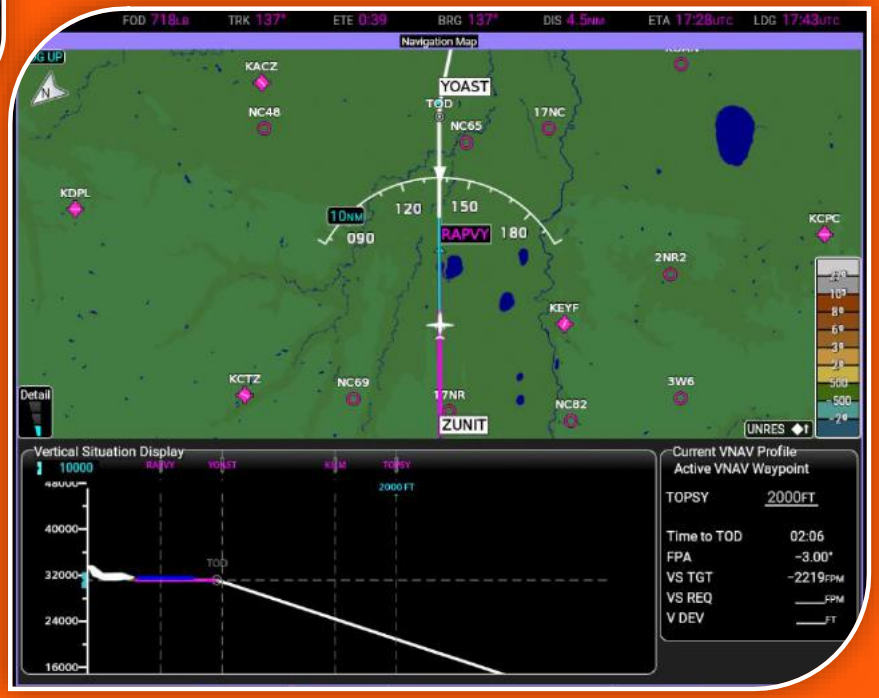
VNAV Descent 3

To Enable the Vertical Situation Display.

1. GTC > HOME > MAP > MAP Settings > Inset Window > VERT Situation Display

With the MAP Full Screen on the MFD the Vertical Profile is Visualized. Additionally the Data Box on the right is visible (hidden in Split Pane Mode) which depicts the Time to the TOD and the Target FPA.

NOTE: The TOD "Donut" is also Visible on the MAP near waypoint YOAST.



Top Of Descent

This Phase of Flight will get busy. Preparation Ahead of the TOD is advisable.

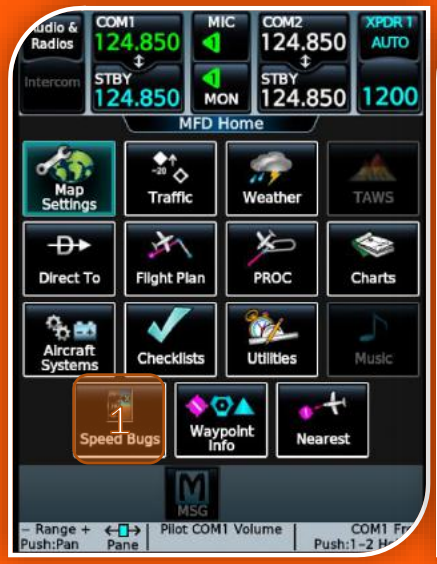
1. On the GFC Set the ALTS to 1800 Feet
2. On the GFC Press VNAV
3. Verify VNAV Mode is Armed on the PFD. VALT 31,000 in Green and PATH in White

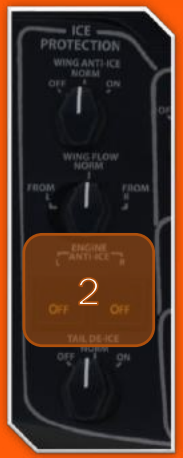
HJet

Descent

Time To Load the Landing Speeds and then Run the Descent Checklist

1. GTC > HOME > Speed Bugs
2. Press Get From Sim (This will Sync the Weights)
3. Select All ON
4. Verify on the PFD
5. Run the Checklist





Descent Checklist

1. Landing Field Elevation (Verify). This is automatically set by the HJet when loading the Approach. Verify the LFE on the EIS Display.
2. Engine Anti-Ice (As Required). The Weather conditions today should not require it. If Ice is detected the CAS messages will notify the pilot.
3. Altimeters (Transition Altitude) SET. As per the preset weather this will require Setting the PFD and STBY to 30.02 at 18,000FT

HJet