HPG H160 Quick-Start Guide

Content Creator Preview
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This product is compatible only with Microsoft Flight Simulator.

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Installation

You've either been presented with manual installation ZIP files to unpack to Community, or Hype Operations Center should be used to install:
https://davux.com/docs/ops/#download-install

Configure your controls

In the documentation below, text styled as **MSFS Binding** refers to a function you may immediately assign in the MSFS CONTROLS OPTIONS display. Additional bindings for the cockpit (all functions) are available via Hype Operations Center.

Primary Flight Controls

Common name **MSFS Binding**	
Collective **THROTTLE AXIS** **-or-** **COLLECTIVE AXIS**	Pick only one axis. The H160 has a FADEC (full authority digital engine control) which controls the engine fuel metering without a manual throttle axis, even in reversion mode.
Cyclic Pitch **ELEVATOR AXIS** **-or-** **CYCLIC LONGITUDINAL AXIS**	
Cyclic Roll **AILERONS AXIS** **-or-** **CYCLIC LATERAL AXIS**	
Yaw Pedals **RUDDER AXIS** **-or-** **TAIL ROTOR AXIS**	You may also use the split-rudder axis: **RUDDER AXIS LEFT** and **RUDDER AXIS RIGHT**
Cyclic Trim Release **ROTOR TRIM RESET**	Pause the AFCS logic to take manual control, as well as communicating your intents to the AFCS. Hold this button down while manipulating the cyclic.

Collective controls

These controls are recommended to be bound to your controller, but they are also available for quick access on the tablet by clicking the clock at the top of the screen.

Common Name MSFS Binding	
COLLECTIVE GA **AUTO THROTTLE TO GA**	Engage **Go Around** mode
4-Way Collective Beep Trim **INCREASE AUTOPILOT N1 REFERENCE** **DECREASE AUTOPILOT N1 REFERENCE** **RUDDER TRIM LEFT** **RUDDER TRIM RIGHT**	Contextual to the engaged AFCS modes.

Cyclic controls

These controls are recommended to be bound to your controller, but they are also available for quick access on the tablet by clicking the clock at the top of the screen.

Common Name MSFS Binding	
AP/BKUP ON **AUTOPILOT ON**	Press once: Engage **AP1**, **AP2**, & **BKUP** Press twice: Select **ALT**, **HDG**, & **IAS**.
AP/BKUP CUT **TOGGLE DISENGAGE AUTOPILOT**	Press once: Disengage **AP1** and **AP2** Press twice: Disengage **BKUP**
AP/UM OFF **AUTOPILOT OFF**	Press once: Cancel selected upper modes Hold for 2SEC: Clear preselections (bugs)
AP/GTC **TOGGLE AUTO HOVER**	Press once: Engage **GTC** Press twice: Engage **HOVER**
4-Way Cyclic Beep Trim **INCREASE ROTOR LONGITUDINAL TRIM** **DECREASE ROTOR LONGITUDINAL TRIM** **INCREASE ROTOR LATERAL TRIM** **DECREASE ROTOR LATERAL TRIM**	Contextual to the engaged AFCS modes.

For more information please see the H145 documentation for CONTROLS and SETTINGS
https://davux.com/docs/h145/CONTROLS.html
https://davux.com/docs/h145/SETTINGS.html

Don't forget to use **Trim Release** anytime that you manipulate the cyclic!

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Normal Procedures (Checklists)

A typical flight may make use of the included procedures as follows:

Power-Up	Bring power to the aircraft after storage or otherwise being off. After **Power-Up** the pilots have several options: 1. Start engines 2. Engage RLG (Radio Listening on Ground) to activate the position lights, radios and navigation equipment 3. Connect a GPU (Ground Power Unit) to the aircraft to avoid draining the batteries Eventually, the pilots must either proceed to start engines, or conduct the **Shutdown** checklist.
1. Starting Engine 1 2. Starting Engine 2 3. After Engine Start 4. AFCS Pre-Flight Test	These 4 checklists should be conducted together in sequence. If there is a problem starting engines, the start should be aborted and the **Shutdown** checklist executed.
1. Taxiing 2. Before Takeoff	**Taxiing** checklist needs to be executed before leaving the parking position, and is used even if ground taxi or air taxi will not be conducted (e.g. if departing from the parking position directly).
1. Takeoff - Clear Area (CAT A) **-OR-** 2. Takeoff - Ground Helipad (CAT A)	Clear Area takeoff may be used when there are no obstructions in front of you (such as a runway). Should an engine fail before the TDP (takeoff decision point), then you can land on the runway. A vertical takeoff (suitable for restricted area, like an offsite landing) or rearward takeoff can be used and should an engine fail before the TDP, the pilot may return to the start position.
Climb Level Flight Descent Before Landing	
Landing - Standard **-OR-** Landing - Sloped	Adhere to the sloped landing limitations.
Shutdown	Remove power from the aircraft.

Power-Up

This is the first checklist. This checklist brings power onto the aircraft and is used prior to starting engines.

Overhead Panel
1. BAT 1, BAT 2 …………………………..………. ON
2. GEN 1, GEN2, EGEN …………………………..…… ON
3. DC GPU (If Connected) ………………………………. ON
4. **PWR-UP TEST OK** ….….………………………….. CHECK
5. RA1, RA2 ……………………………………………. ON
6. FMS1, FMS2 ………………………………………… ON
7. LAMP TEST……………………………………….... TEST
    a. "AUDIO TEST" voice message ………..…. AUDIBLE
    b. Lights illuminated ……………………………. CHECK
	NOTE: MFD3 (copilot inboard) will not have any power until either the GPU is connected or a generator is online.
	GPU Status
	
	Available **ON** Connected

Pilot MFD (FND page) 7. Message List ……………. CHECK and ACKNOWLEDGE 8. FND page …………………... CHECK parameters validity 9. Heading ……………... COMPARE with Standby Compass 10. Altimeters and IESI ……………………………….. SET 11. Decision Height and Decision Altitude… AS REQUIRED 12. Fuel Quantity ………………………………….. CHECK	There are 3 air data systems (copilot, pilot and IESI). You will need to set the pressure setting on all 3.
Lighting Panel (Center Console) 13. POS and ACOL Lights …………..…….. AS REQUIRED 14. SIGNS ……………………………….. AS REQUIRED 15. EMER EXIT ……………………………………… ARMED 16. Cockpit Lighting ……………………….…AS REQUIRED	Generally position lights (POS) should be on anytime the battery is on. Red ACOL shall be used prior to engine start to warn any nearby personnel. Red+White ACOL shall normally be used in flight.
Forward Center Console 17. FLOATS (If Installed) …………….…………….…… OFF 18. WIPERS …………………………………. AS REQUIRED 19. HTAWS …………………………………………………. ON **Weather Radar Control Panel (Rear Center Console)** 20. WXR (if required)………………… TEST and then STBY	Note: currently prior to starting engines, the weather radar can only be activated by using the SHED OVER switch (in the pilot footwell area).
MFD (DMAP page) 21. DMAP ……………………… CHECK or AS REQUIRED **MFD (VMS page)** 22. VMS MAIN page …………. CHECK parameters validity 23. VMS SYST page …………… CHECK equipment status 24. VMS WEIGHT data ……..…… ENTER and (VAL)IDATE 25. Engine oil levels and temperatures …………… CHECK	Entering weight data will SET the aircraft payload (similar to using the MSFS payload menu). The payload menu may alternatively be used and the VMS WEIGHT Page will reflect accurate payload information.
26. OEI Rating Selection……………………………….. CHECK	You can access the OEI HI/LO selector on the tablet autopilot panel (expanded section), or by

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	binding the hotkeys. You can't click on our collective OEI HI/LO button (as it would be difficult anyway).
Flight Controls Check - To be performed once per day. **Overhead Panel** 27. AUX PUMP …………………………………………….. ON 28. Cyclic stick (longitudinal & lateral) …….. FREE TRAVEL 29. Collective pitch ………………………….. FREE TRAVEL 30. Pedals ……………………………………… FREE TRAVEL 31. Cyclic, Pedals …………………………….. CENTER 32. Collective ………………………………………….. DOWN 33. AUX PUMP …………………………….…… OFF	Stick forces are not simulated unless using Force Feedback controllers, but you can still check your controls have free travel. Auxiliary hydraulic pump (electric) is required for testing the flight controls. It is not needed during flight.

Starting Engine 1

This checklist will start the first engine. You can pick to start engine 2 or 1 first.

Inboard Pilot MFD (MFD4) 1. VMS page (MFD4) ……………………...…….. SELECT **Overhead Panel** 2. ENG1 or ENG2 …………………………………….. IDLE **Inboard Pilot MFD (MFD4)** 3. **START** ……………………………………….. CHECK 4. N1 and TOT …………….…………………… MONITOR 5. Rotor spinning ………………………. BEFORE N1 > 25% 6. **START**…………………….…... Disengaged at ~50% N1 7. N2 and NR …………………….… OBSERVE acceleration 8. TRQ ……………………………………...…… Increases 9. HYD Pressure ……………………………...…… Increases 10. MGB Pressure …………………………….…… Increases 11. NR ………………………….…….. CHECK stabilized 80% **Center Console** 12. ECS (climate control) …………………... AS REQUIRED	

Starting Engine 2

This checklist will start the second engine after the first is already running.

Overhead Panel 1. ENG1 or ENG2 ……………………………………….. IDLE **Inboard Pilot MFD** 2. **START** ……………………………………….… CHECK 3. N1 and TOT …………….….………………… MONITOR 5. **START**………………………….... Disengaged at ~50% N1 6. N2 (1 & 2) and NR …………..… OBSERVE synchronization	

After Engine Start

This checklist must be run directly after starting the second engine

Overhead Panel 1. DC GPU (if coupled) ………….. PRESS (DISCONNECT) 2. `GPU DOOR` …………………………………..………CHECK 3. FLOATS (if installed) …………...AUTO or AS REQUIRED	NOTE: GPU DOOR is not simulated yet.

AFCS Pre-Flight Test

The pre-flight test should be run on the first flight of the day.

1. COLLECTIVE PITCH ……………………… MINIMUM 2. Cyclic Stick and Pedals ….. HANDS OFF and FEET OFF **Autopilot Control Panel** 7. A.TRIM, AP1, AP2, BKUP ……………………………. ON **Overhead Panel** 3. TEST switch ……………………………..……. PRE-FLT 4. `P-FLT TST` on message list ……………………… CHECK 5. `P-FLT TST OK` on message list …………..……… CHECK 6. AFCS ……………………………… OFF (fast cut) then ON	To fast-cut the AFCS, use **AP/BKUP CUT** (twice) and then **AP/BKUP ON**, or use the APCP and manually click AP1, AP2, and BKUP. **APCP Status** | `OFF` | `OFF` | | System Off | System On |

Taxiing

This checklist is to be run after both engines are started and before takeoff. If taxi is not needed, this checklist still must be completed through step 6.

Overhead Panel 1. ENG1 and ENG2 …………….………. FLIGHT (guarded) 2. Message list ………………………………………….. CHECK 3. Inboard Pilot MFD format …………..……… AS REQUIRED 4. Landing Lights ……………………………… AS REQUIRED **Forward Center Console** 5. NOSE WHEEL ……………………………………… FREE 6. PARK BRAKE ……………………………………… OFF	Landing light control is on the collective (not usable - make a key binding or use the tablet lights panel).
To Begin Taxi: 7. Collective pitch ………………. INCREASE (as necessary) 8. Cyclic Stick ……….. ADJUST (forward and into the wind) 9. Collective pitch ……..……… ADJUST (to maintain speed) 10. Pedals …………………………………… USE for turning **Stopping:** 11. Collective pitch …………..…….. REDUCE to MINIMUM 12. Wheel Brakes …………………………….. APPLY gradually 13. Cyclic Stick …………………..……… NEUTRAL position	Minimal cyclic and collective should be used for ground taxi. Expect to use between FLI 1.5-2.5 depending on weight.

Before Takeoff

This checklist must be run prior to takeoff.

1. Flight Performance (VMS) ………………….. COMPUTED **Forward Center Console** 2. PARK BRAKE ……………………………….. AS REQUIRED 3. AFCS UPPER MODES …. PREPARED (AS REQUIRED) 4. DA, DH, Baro setting ……………………………... CHECK 5. Transponder ………………………………….... CHECK 6. Floats (if installed) …………………………...… AUTO 7. Message list ……………………………………… CHECK	Check WEIGHT & PERFORMANCE to determine suitability for use of OEI ratings of capability of CAT A takeoff.

Takeoff - Clear Area CAT A

This is a takeoff option checklist for ground level with no obstructions. If an engine were to fail at a critical time, rejection would result in landing (e.g. on the runway in front of you).

1. Hover (IGE) at 6ft, into the wind …………..…… PERFORM 2. Attitude ……………….. NOSE DOWN approx 10 degrees 3. IAS …………………………………..…… INCREASE to VY When height is > 100ft 4. Collective pitch ……...……. MAX CONTINUOUS POWER **Forward Center Console** 5. L/G ………………………………………………………UP	IGE: In ground effect

Takeoff - Ground Helipad CAT A

This procedure can be used to engage a rearward or vertical profile takeoff with assistance from the AFCS to maintain trajectory. These are VFR procedures that do not reduce the minimums but rather support the pilot and reduce workload.

1. PARK BRAKE ……………………………………...…… ON
2. NR HI ……………………………………………………….. ON
3. DA, DH, Baro setting …………………………………….. SET
4. HOV subformat (FND page) ………………...……… SELECT
5. T/O mode (FND page) …………………………... SELECT
6. **REARWARD TAKEOFF** or
   VERTICAL TAKEOFF …………….……………. CHECK
7. T/O TDP (FND page) …………………………… SELECT
8. Hover (IGE) at 6ft, into the wind ……...……… PERFORM
9. AP/GTC …………………………………PRESS TWICE
10. **HEIGHT** and **HOVER**……………………….. CHECK
11. GO AROUND …………….. PRESS (engage procedure)
12. **REARWARD TAKEOFF** or
    VERTICAL TAKEOFF …………….……...…….. CHECK
 	
If an engine fails before TDP
13. **REJECTED** ……………………………….……… CHECK
	NR HI switch is between the engine start switches on the overhead panel. It engages rotor rpm of 105%.
	
	HOV subformat has the brown ground-speed lines (under the HSI/SCT/HOV button).
	
	Select the TDP (Takeoff decision point) using the MFD knob.
	
	The **GO AROUND** command is available as a key binding and also on the tablet autopilot panel.

14. Aircraft descent trajectory ………… MANAGE if needed **If an engine fails after TDP** 15. <mark>CONTINUED TAKEOFF</mark> ....CHECK **At the TDP** 16. GO AROUND ……………… PRESS (engage Fly-Away) 17. <mark>GO AROUND</mark> …………………….....………..... CHECK **At VY** 18. NR HI ……………………………………………....…. OFF 19. PARK BRAKE …………………….…………… OFF 20. L/G …………………………………………….…… UP	IFR flight is possible from the TDP onward. Be advised that after touchdown, your collective will become active again so you should lower it during the REJECTED segment. You may also use Collective Trim Release to intervene and cushion the landing

Climb

This checklist is to be used after any takeoff procedure is performed.

1. Collective pitch ……...……. MAX CONTINUOUS POWER 2. Recommended climb speed ………………………….VY 3. AFCS UPPER MODES ………………… AS REQUIRED 4. DA, DH, Baro setting ……………………………... CHECK 5. Landing Lights …………………………………… OFF **Lighting Panel (Center Console)** 6. SIGNS …………………………….……….AS REQUIRED	VY is about 65 kt and visible on the airspeed tape. Landing light control is on the collective (not usable - make a key binding or use the tablet lights panel).

Level Flight

This checklist is to be used during the cruise portion of the flight.

1. AFCS UPPER MODES ………………….. AS REQUIRED 2. DA, DH, Baro setting …………………………..... ADJUST 3. Fuel Quantity …………………………….………… CHECK 4. Navigation, Radios ……………………….. AS REQUIRED	

Descent

This checklist is to be used after the cruise portion of the flight.

1. SIGNS ……………………………….……….AS REQUIRED 2. AFCS UPPER MODES …………..………. AS REQUIRED 3. DA, DH, Baro setting ……………………………..... ADJUST 4. FLI …………………………… CHECK above desync lines 5. IAS …………………………………………… AS REQUIRED	The FLI desync lines are at FLI 2.5 and they are two horizontal white lines. This point on the FLI signifies where the rotor may begin autorotation and it is best to maintain the collective above this point.

Before Landing

This checklist is to be used before landing.

Forward Center Console 1. L/G ………………………………… DOWN (3 green lights) 2. NOSE WHEEL ……………………..…. AS REQUIRED 3. PARK BRAKE ………………………..…… AS REQUIRED 4. DA, DH, Baro setting ………………………....... CHECK 5. Landing Lights …………………………………..… ON **Lighting Panel (Center Console)** 6. SIGNS ……………………………..……..AS REQUIRED 7. ANTICOL ………………………….. ON (color as required)

Landing - Standard (Level surface)

This checklist is to be used for a standard landing on a reasonably level surface like an airport or helipad.

1. IAS ………………………………………………… 50kt 2. Rate of Descent ………………………… approx. -500fpm **When at 50ft** 3. IAS …………………………….…… REDUCE continuously **Before touchdown** 4. Attitude …………………. NOSE UP to stop the helicopter 5. HOVER at 6ft …………………………..……… PERFORM 6. Collective pitch …………………………..……… REDUCE **When on ground** 7. Collective pitch …………………………..… MINIMUM

Landing - Sloped

This procedure is to be used when landing on a slope.

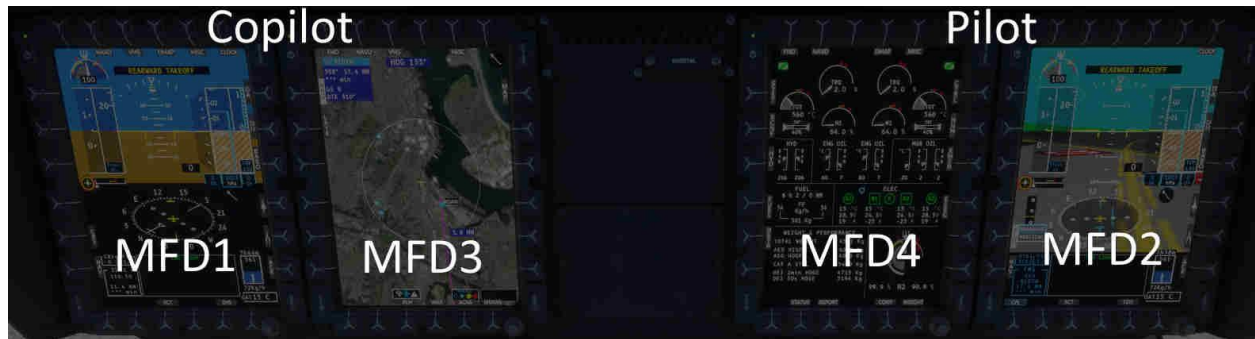|	
1. PARK BRAKE …………………..………………….… ON 2. NOSE WHEEL …………………….………....…. LOCK 3. HOVER at 6ft …………………………………… PERFORM 4. Collective pitch …………………….. GRADUALLY REDUCE 5. Cyclic stick …………………………. USE to prevent rolling **When all wheels are on the ground** 6. Collective pitch …………………………………… MINIMUM 7. Cyclic stick ……………………………………….. CENTER	Respect sloped landing limitations.

Shutdown

This checklist shuts down the engines and removes power from the aircraft. It is the last checklist as the aircraft will subsequently be Cold & Dark.

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1. PARK BRAKE ……………………..……………….. ON 2. Collective pitch …………………………….. MINIMUM 3. Cyclic stick and pedals …………………..…. CENTER 4. ENG1, ENG2 ……………………………..…… IDLE 5. Floats (if installed) …………………………….. OFF 6. RA1, RA2 ………………………………….... OFF 7. ECS …………………………………………….. OFF **After 30 seconds cooldown** 8. ENG1, ENG2 ……………………………..…… OFF 9. Rotor brake ……………..…….. APPLY when NR < 50% **After the rotor stops** 10. Rotor brake …………………………………… RELEASE 11. Flight Report (VMS) …………………..……. CHECK 12. Lighting (external, cockpit, emergency) ………….... OFF 13. <mark>DOWNLOAD COMPLETE</mark> ………………....… CHECK 14. BAT1, BAT2 …………………………………..…. OFF 15 All switches ………………………………………. OFF	Rotor brake handle is in the center of the overhead area

Avionics

There are 4 Helionix MFDs installed, two for the pilot and two for the copilot. With the exception of the outboard pilot MFD, the pages may be selected freely between the different formats.

FND (Flight and Navigation Display)	FND contains the basic pilot information and is the most important format.
NAVD (Navigation Display)	NAVD is to be used during enroute navigation and has use of the weather radar.
VMS (Vehicle & Systems Management)	VMS contains detailed information about the aircraft systems, and is to be used to monitor engines during startup.
DMAP (Digital Map System)	DMAP is a map system with online weather and various map styles.
MISC (Auxiliary cameras)	MISC is used for integration of cameras.

Each of the pages above are available by selecting named keys at the top of each MFD.

Each MFD has various brightness controls in addition to the power button:

LUM (Luminance)	This controls **overall** display brightness
CTRS (Contrast)	This controls **overlay** display brightness (HTAWS, WXR)
BRT (Brightness)	This controls **underlay** display brightness (DMAP, SVS)

FND (Flight and Navigation Display) page

The FND or Flight-and-Navigation Display page is the primary pilot display and contains information about the status of the AFCS, AHRS and air data as well as navigation information and vehicle monitoring.

AFCS Status Rotor & N2 Rpm First Limit Indicator Airspeed Indicator Vertical Speed Barometric Altitude Radio Altitude Mast Moment HSI Glideslope Message list **NAV**: Select navigation source (NAV1/NAV2/FMS)		**CLOCK**: Chronograph/Time **DA**: Select Decision Altitude **DH**: Select Decision Height **BARO**:Select barometric setting **BEARING 1**: Select bearing pointer 1 **BEARING 2**: Select bearing pointer 2 **ACK**: Acknowledge messages OAT: Outside air temperature
	CPL: Couple/Decouple selected navigation source **SCT**/**HSI**/**HOV**: Switch lower subformat **SVS**: Enable or disable synthetic vision	

VMS (Vehicle Management System) page

The Vehicle Management System (VMS) page shows detailed system status. It is required to be open during engine starting but may be closed for the flight unless some condition warrants investigation.

VMS page - MAIN format

The MAIN format is the default format and contains detailed engine information, as well as hydraulic, main gearbox, fuel and electrical overview. The lower panel contains additional subformat status pages.

SYST: System status sub-page

RCNF: Reconfigure sub-page

HYD: Hydraulic system sub-page

FUEL: Fuel system sub-page

DATA: Data view:
1. Weight & Performance
2. Timezone
3. Hoist
4. Sling load
5. Tank status

MAIN

CTRL: Flight controls page

NUM: Show digital values for parameters.

XMSN: Transmission system sub-page

ELEC: Electrical system sub-page

PREV: Back to MAIN subformat
STATUS: Select FADEC Status subformat
REPORT: Select Flight Report
EPC: Engine Power Check subformat
CONF: System Configuration subformat
WEIGHT: Weight selection subformat

VMS page - SYSTEM format

The SYSTEM format has an overview of connected equipment status, as well as detailed status for the AFCS components. The PRE-FLIGHT test status will also be visible in the lower section.

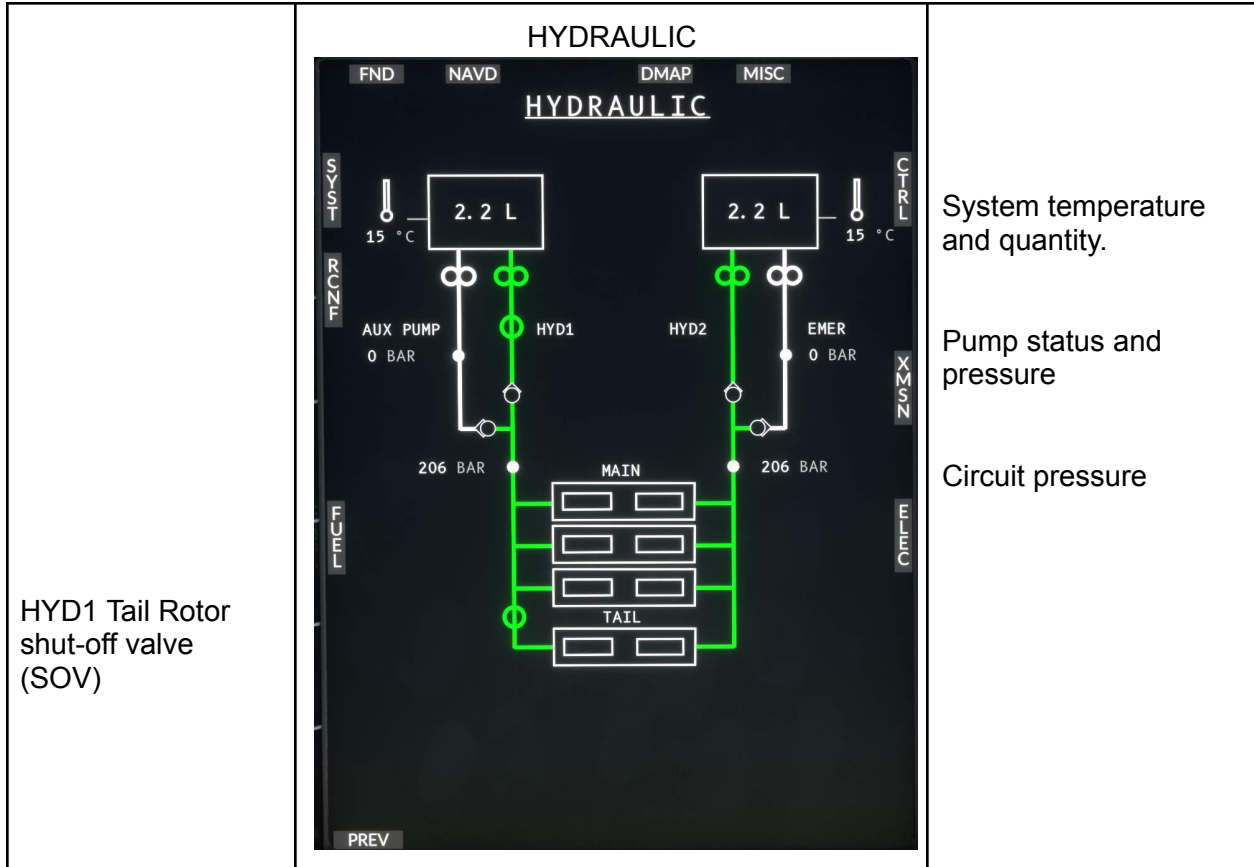|		
	SYSTEM 	Equipment is displayed at the top. Disconnected or failed equipment will be highlighted in red. AFCS component status: 1. APCP 2. AP1, AP2, BKUP 3. Cyclic controls 4. Collective controls 5. Trim status 6. SEMA status

VMS page - RECONFIGURE format

The RECONFIGURE format displays the sensor status and configuration. Each MFD automatically configures itself to best use the available sensors.

	RECONFIGURE FND NAVD DMAP MISC MFD1 MFD3 MFD4 MFD2 ATT1 ATT1 ATT2 ATT2 AIR1 AIR1 AIR2 AIR2 HDG1 HDG1 HDG2 HDG2 RA1 RA1 RA2 RA2 FMS1 FMS1 FMS2 FMS2 SYST CTRL ATT1 IESI ATT2 PIT: -0 PIT: -0 PIT: -0 ROL: -0 ROL: -0 ROL: -0 HYD XMSN AIR1 IESI AIR2 Hp: 1013 Hp: 1013 Hp: 1013 IAS: 0 IAS: 0 IAS: 0 FUEL ELEC HDG1 HDG2 MAG: 133 MAG: 133 RA1 RA2 -0 -0 PREV	Each MFD is shown with its current sensor configuration. Each of the 3 AHRS systems with status. Each of the 3 air data systems with status. Each of the two magnetometers with status. Each of the two Radio Altimeters with status.

VMS page - HYDRAULIC format

The HYDRAULIC format displays detailed system status for hydraulic system 1 and 2. Each of the pumps and valves are displayed along with pressure and quantity monitoring.
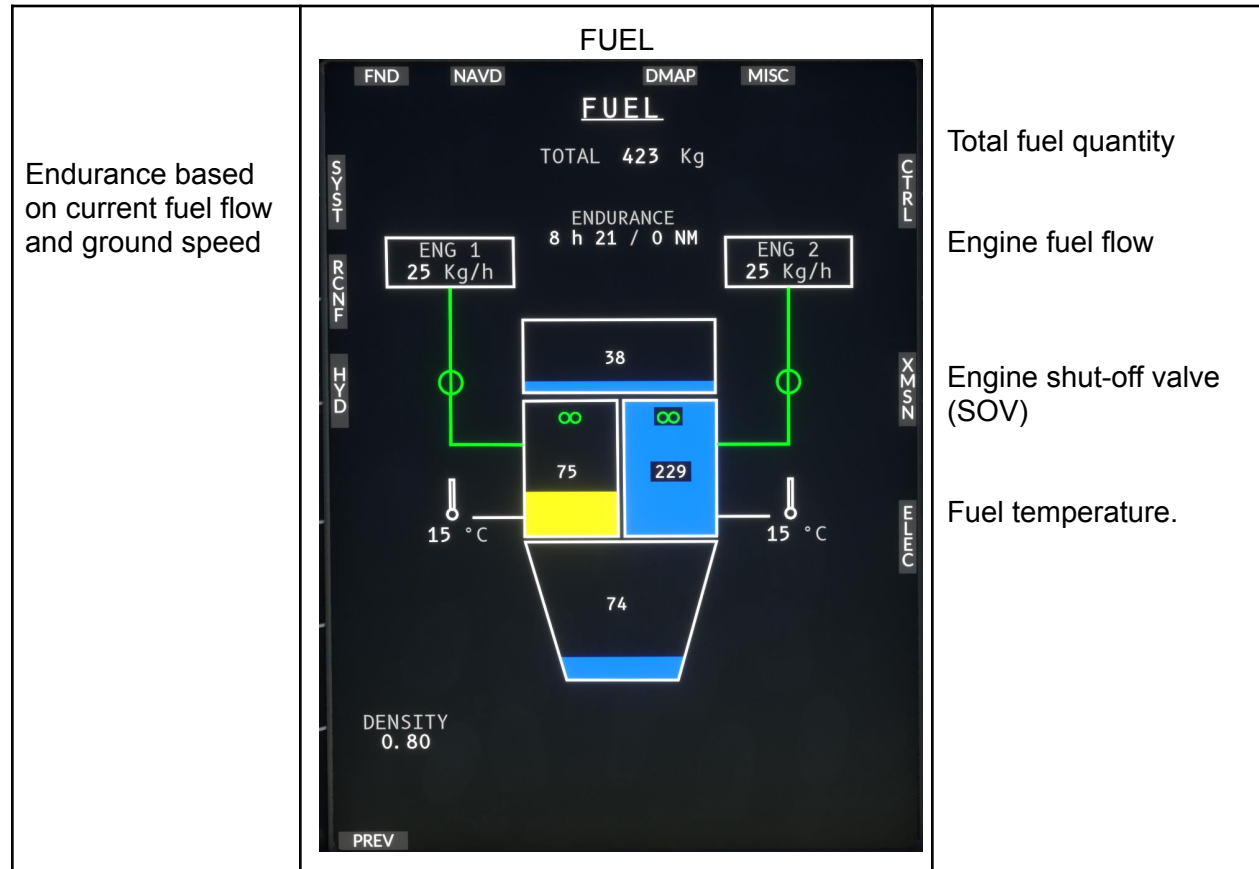
	HYDRAULIC FND NAVD DMAP MISC **HYDRAULIC** SYST — 15 °C — 2.2 L 2.2 L — 15 °C — CTRL RCNF AUX PUMP HYD1 HYD2 EMER 0 BAR 0 BAR XMSN 206 BAR MAIN 206 BAR FUEL TAIL ELEC PREV	System temperature and quantity. Pump status and pressure Circuit pressure
HYD1 Tail Rotor shut-off valve (SOV)		

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VMS page - FUEL format

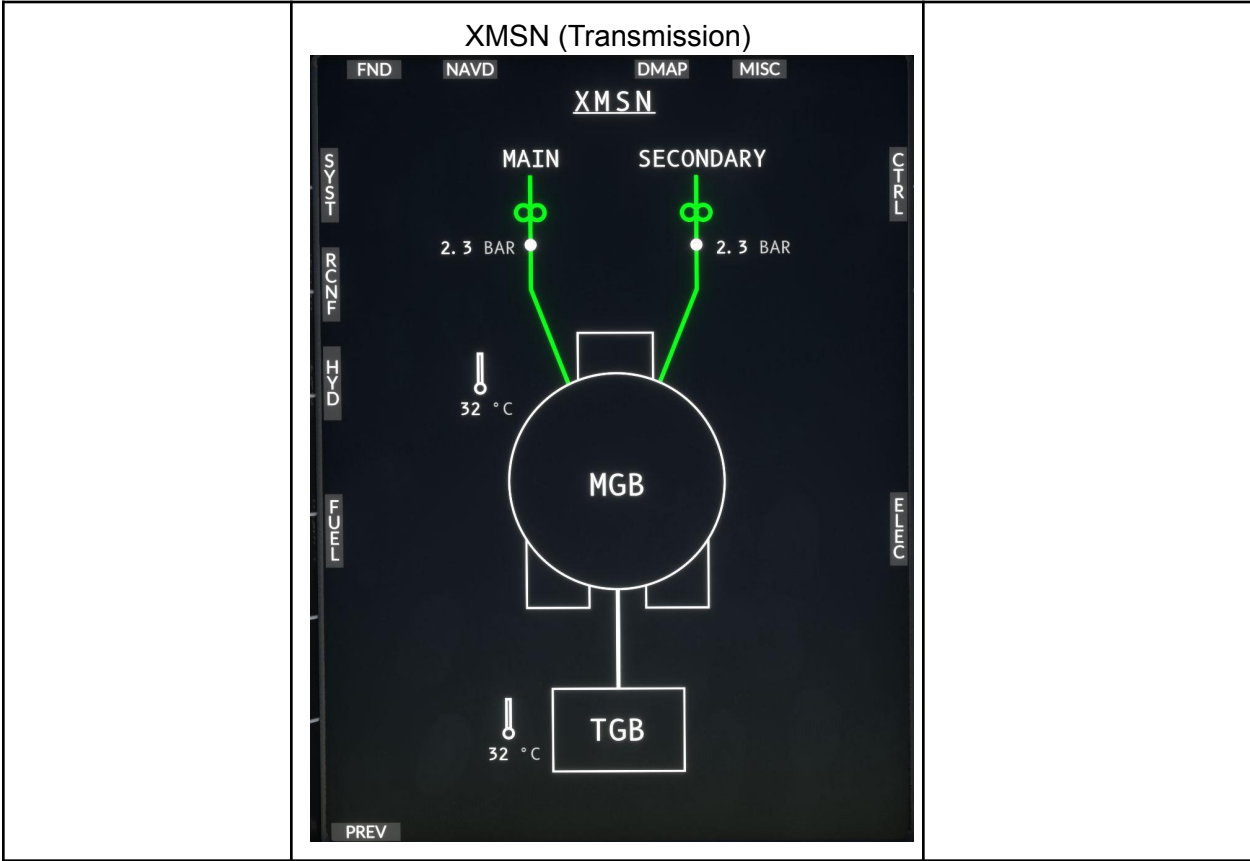|		
Endurance based on current fuel flow and ground speed	FUEL **FUEL** TOTAL 423 Kg ENDURANCE 8 h 21 / 0 NM ENG 1 25 Kg/h ENG 2 25 Kg/h 38 ∞ ∞ 75 229 15 °C 15 °C 74 DENSITY 0.80	Total fuel quantity Engine fuel flow Engine shut-off valve (SOV) Fuel temperature.

VMS page - XMSN (TRANSMISSION) format

XMSN (Transmission)

FND   NAVD   DMAP   MISC

XMSN

MAIN   SECONDARY

S Y S T   C T R L

R C N F

2.3 BAR   2.3 BAR

H Y D

32 °C

F U E L   E L E C

MGB

32 °C   TGB

PREV

VMS page - ELEC (ELECTRICAL) format

ELEC (Electrical)

FND   NAVD   DMAP   MISC

ELEC

15 °C	15 °C	C	15 °C	15 °C
28.5 V	24.3 V	26.0 V	24.3 V	28.5 V
19 A	-25 A	48 A	-25 A	19 A

GEN1   BAT1   EMER GEN   BAT2   GEN2

SYST
RCNF
HYD
FUEL

CTRL
XMSN

28.5 V
GPU

ESS1   ESS2

MAIN BUS 1   MAIN BUS 2

SHD1 HPC1 HLC1   HLC2 HPC2 SHD2

PREV
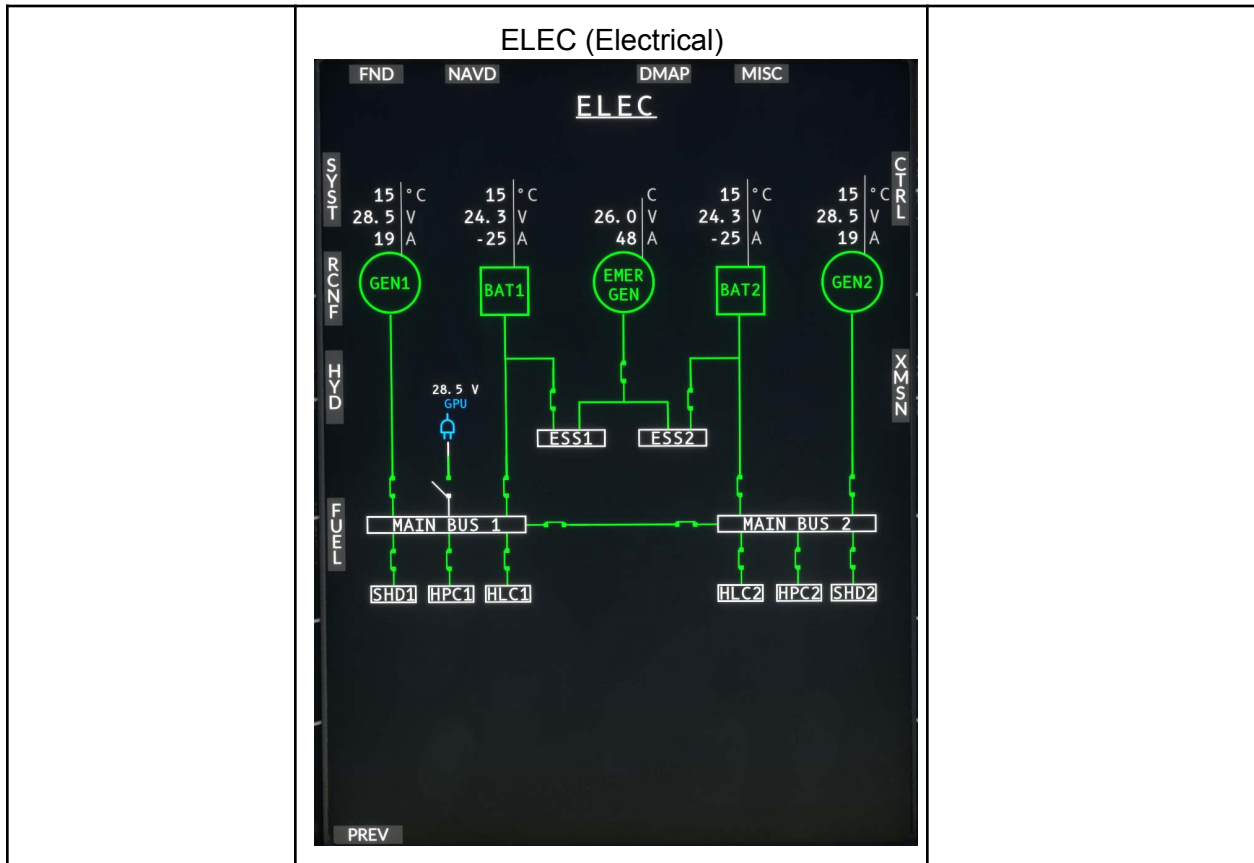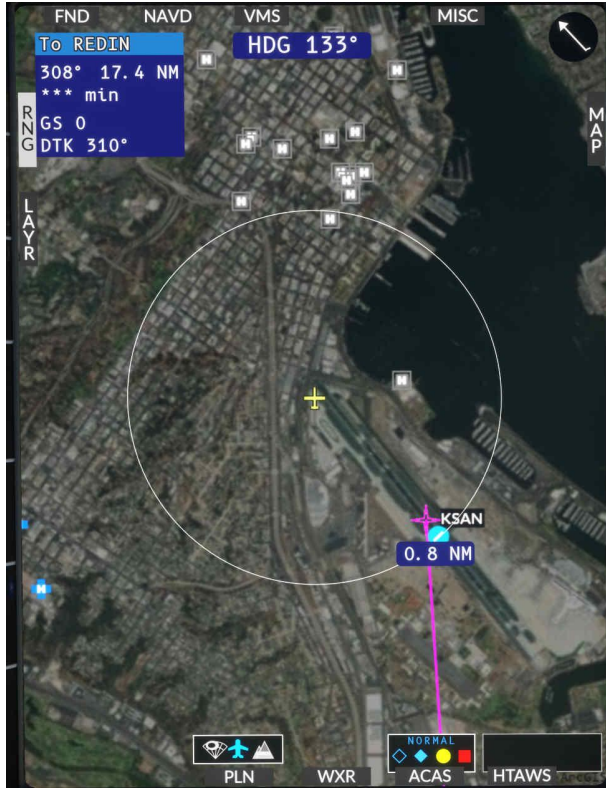
NAVD (Navigation Display) page

The navigation page is used for en-route navigation. It has the DMAP background selection as well as flight plan and multiple display modes.

NAV: Cycle navigation source

RNG: Change map range (use knob)

OFFRT: Show OFF-ROUTE waypoints.

MAP: Change map background (DMAP underlay)

Change bearing 1

Change bearing 2

DATA: Show navigation source data.

CPL: Couple or decouple navigation source.
ROS/SCT/PLN: change map subformat.
WXR: Toggle weather radar overlay.
ACAS: Inop.
HTAWS: Toggle HAT (Height Above Terrain).

DMAP (Digital Map) page

The DMAP or digital map system is a full screen display with configurable map backgrounds and flight plan information.

RNG: Change the map range

LAYR: Select layers:
1. Helipad POI
2. Hospital POI
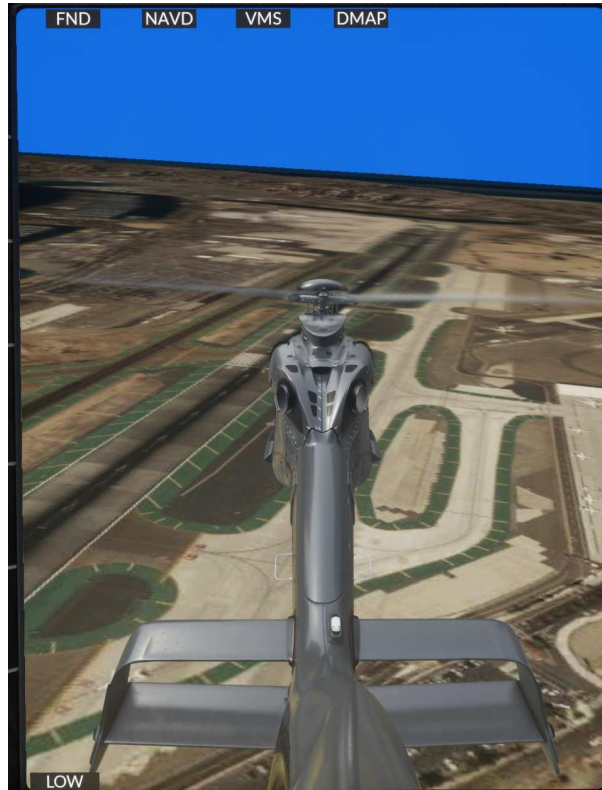3. MSFS POI
4. Airports
& More.

MAP: Change the map style

MISC (Miscellaneous) page

The MISC page integrates auxiliary cameras. Currently this connects to a single camera source, the tail camera.

LOW: Low performance mode

HIGH: High performance mode (with pitch/roll)

Despite the name, **HIGH** has marginal performance impact.

Flight Management System

GTN750

Available from either pms50 or TDSSim. Use the tablet Aircraft app (Options page) to select your preferred FMS.

pms50	TDSSim
https://pms50.com/msfs/	https://tdssim.com/tdsgtnxi

CMA9000

This FMS option will be coming later.

AFCS (Autopilot)

H160 has a powerful 4-axis autopilot with state of the art assisted takeoff modes as well as ground-referenced modes and traditional flight modes.

APCP (Autopilot control panel)	
	Systems: **A.TRIM**: Auto-trim system. Required for use of the AFCS. **BKUP**: Backup SAS, used in case of dual failure of the full autopilot computers. **AP1**: Main computer 1 **AP2**: Main computer 2 The main computers contain a SAS as well as the upper modes ability.

Modes (each knob has a push function to engage/disengage the mode, and a knob to change the reference):

CR.HT: Cruise Height (radio altitude hold)

IAS: Indicated airspeed hold

ALT.A: Altitude acquire

VS/FPA:Vertical speed (traditional) or Flight Path Angle.

HDG/TRK: Heading (traditional) or ground track.

ALT: Barometric altitude hold

The butterfly knob chooses between traditional modes or ground-referenced (GPS) modes.

Cyclic grip
The cyclic grip has these important controls:

Common Name MSFS Binding	
AP/BKUP ON AUTOPILOT ON	Press once: Engage **AP1**, **AP2**, & **BKUP** Press twice: Select **ALT**, **HDG**, & **IAS**.
AP/BKUP CUT TOGGLE DISENGAGE AUTOPILOT	Press once: Disengage **AP1** and **AP2** Press twice: Disengage **BKUP**
AP/UM OFF AUTOPILOT OFF	Press once: Cancel selected upper modes Hold for 2SEC: Clear preselections (bugs)
AP/GTC TOGGLE AUTO HOVER	Press once: Engage **GTC** Press twice: Engage **HOVER**

4-Way Cyclic Beep Trim **INCREASE ROTOR LONGITUDINAL TRIM** **DECREASE ROTOR LONGITUDINAL TRIM** **INCREASE ROTOR LATERAL TRIM** **DECREASE ROTOR LATERAL TRIM**	Contextual to the engaged AFCS modes.
Cyclic Trim Release **ROTOR TRIM RESET**	Pause the AFCS logic to take manual control, as well as communicating your intents to the AFCS.

Collective grip
The collective grip has these important controls:

Common Name **MSFS Binding**	
COLLECTIVE GA **AUTO THROTTLE TO GA**	Engage **Go Around** mode
4-Way Collective Beep Trim **INCREASE AUTOPILOT N1 REFERENCE** **DECREASE AUTOPILOT N1 REFERENCE** **RUDDER TRIM LEFT** **RUDDER TRIM RIGHT**	Contextual to the engaged AFCS modes.

Additional ease-of-use controls are provided on the tablet, for those that can't bind all the functions directly to their controller.

Read more: https://davux.com/docs/h145/AFCS.html