VARIABLES GARMIN O INSTRUMENTOS TERCIARIOS

FMS (PLAN DE VUELO):

GPS FLIGHTPLAN TOTAL DISTANCE	This is the complete flightplan length from start to end. Essentially the cumulative length of all the flight plan legs added together.	Meters	✗
GPS FLIGHT PLAN WP COUNT	Number of waypoints.	Number	✓
GPS FLIGHT PLAN WP INDEX	Index of waypoint.	Number	✓

GPS WP BEARING	Magnetic bearing to waypoint.	Radians	✓
GPS WP CROSS TRK	Cross track distance.	Meters	✓
GPS WP DESIRED TRACK	The required heading (magnetic) from the previous waypoint to the next waypoint.	Radians	✓
GPS WP DISTANCE	Distance to waypoint.	Meters	✓
GPS WP ETA	Estimated time of arrival at waypoint.	Seconds	✓
GPS WP ETE	Estimated time en route to waypoint.	Seconds	✓

GPS WP NEXT ALT	Altitude of next waypoint.	Meters	✓
GPS WP NEXT ID	ID of next GPS waypoint.	String	✓
GPS WP NEXT LAT	Latitude of next waypoint.	Degrees	✓
GPS WP NEXT LON	Longitude of next waypoint.	Degrees	✓
GPS WP PREV ALT	Altitude of previous waypoint.	Meters	✓
GPS WP PREV ID	ID of previous GPS waypoint.	String	✓
GPS WP PREV LAT	Latitude of previous waypoint.	Degrees	✓
GPS WP PREV LON	Longitude of previous waypoint.	Degrees	✓
GPS WP PREV VALID	Is previous waypoint valid (i.e. current waypoint is not the first waypoint).	Bool	✓
GPS WP TRACK ANGLE ERROR	Tracking angle error to waypoint.	Radians	✓
GPS WP TRUE BEARING	True bearing to waypoint.	Radians	✓
GPS WP TRUE REQ HDG	Required true heading to waypoint.	Radians	✓
GPS WP VERTICAL SPEED	Vertical speed to waypoint.	Meters per second	✓

GPS (NAVEGACION):

GPS CDI SCALING	The full scale deflection of the CDI due to GPS cross-track error, in meters.	Meters	✓

GPS GROUND TRUE TRACK	Current true ground track.	Radians	✓
GPS GSI SCALING	The full scale deflection of the vertical GSI due to GPS glidepath deviation, in meters.	Meters	✓
GPS HAS GLIDEPATH	Whether or not the GPS system has a presently available glidepath for guidance. Only applicable with GPS_OVERRIDDEN. When true and in GPS OVERRIDDEN, HSI_GSI_NEEDLE_VALID will also be true.	Bool	✓
GPS HSI NEEDLE	The glide deviation of the needle for a CDI instrument. The simvar displays the deviation from -127 to +127. It returns a value if a flight plan is set (otherwise it will return 0) even if the autopilot isn't on GPS mode. Scaling can also be set through the GPS CDI SCALING simvar.	Number	✗
GPS IS ACTIVE FLIGHT PLAN	Flight plan mode active.	Bool	✓
GPS IS ACTIVE WAY POINT	Waypoint mode active.	Bool	✓
GPS IS ACTIVE WP LOCKED	Is switching to next waypoint locked.	Bool	✗
GPS IS APPROACH ACTIVE	Is approach mode active.	Bool	✗
GPS IS APPROACH LOADED	Is approach loaded.	Bool	✗
GPS IS ARRIVED	Is flight plan destination reached.	Bool	✓

GPS WP BEARING	Magnetic bearing to waypoint.	Radians	✓
GPS WP CROSS TRK	Cross track distance.	Meters	✓
GPS WP DESIRED TRACK	The required heading (magnetic) from the previous waypoint to the next waypoint.	Radians	✓
GPS WP DISTANCE	Distance to waypoint.	Meters	✓
GPS WP ETA	Estimated time of arrival at waypoint.	Seconds	✓
GPS WP ETE	Estimated time en route to waypoint.	Seconds	✓

Simulation Variable	Description	Units	Settable
NAV ACTIVE FREQUENCY:index	Nav active frequency. Index is 1 or 2.	MHz	✗

NAV RADIAL	Radial that aircraft is on.	Degrees	✗
NAV RADIAL ERROR	Difference between current radial and OBS tuned radial.	Degrees	✗

INFORMACIÓN DEL MOTOR:
ya puestas en variables panel de instrumentos

ENG MAX RPM	The indexed engine (see note) Maximum rpm.	RPM	✖
GENERAL ENG RPM:index	The RPM for an indexed engine (see note). **NOTE**: *This is available in multiplayer to all far aircraft. See here for more information: Note On SimVars In Multiplayer.*	RPM	✔
ENG OIL PRESSURE:index	The indexed engine (see note) oil pressure.	pounds per square foot (*psf*)	✖
ENG OIL QUANTITY:index	The indexed engine (see note) oil quantity as a percentage of full capacity.	*Percent Over 100*	✖
RECIP ENG FUEL FLOW:index	The indexed engine (see note) fuel flow.	Pounds per hour	✔
RECIP ENG FUEL NUMBER TANKS USED:index	Number of tanks currently being used by the indexed engine (see note).	Number	✖
RECIP ENG FUEL TANKS USED:index	Fuel tanks used by the indexed engine (see note), one or more of the following bit flags: Center 1 Bit 0 Center 2 Bit 1 Center 3 Bit 2 Left Main Bit 3 Left Aux Bit 4 Left Tip Bit 5 Right Main Bit 6 Right Aux Bit 7 Right Tip Bit 8 External 1 Bit 9 External 2 Bit 10	Mask	✔

SISTEMA GPWS:

GPWS SYSTEM ACTIVE	True if the Ground Proximity Warning System is active.	Bool	✔
GPWS WARNING	True if Ground Proximity Warning System installed.	Bool	✖

SISTEMA TCAS (FLARM):

FLARM

Simulation Variable	Description	Units	Settable
FLARM AVAILABLE	Whether the FLARM is available (TRUE, 1) or not (FALSE, 0).	Bool	✓
FLARM THREAT BEARING	The bearing of the FLARM threat aircraft, relative to track.	Degrees	✗
FLARM THREAT DATA	The FLARM threat aircraft data structure, which contains data about the perceived threat, returned as a struct. Struct member variables are as follows: `id` (U62): the network id of the intruding plane so that they are remembered in order to compute their trajectory. `bearing` (FLOAT64): The threat bearing, in degrees (this is bearing from track axis and not bearing from the airplane axis). `heading` (FLOAT64): The threat heading. `distance` (FLOAT64): The distance between the aircraft and the threat, in meters. `verticalBearing` (FLOAT64): The vertical bearing between the aircraft and the threat, in degrees. `relativeAltitude` (FLOAT64): The relative altitude of the threat to the aircraft, in meters. `timeToCollision` (FLOAT64): The estimated time to a collision, in seconds.	Struct	✗
FLARM THREAT DISTANCE	The distance to the FLARM threat object.	Meters	✗
FLARM THREAT HEADING	The heading to the FLARM threat object.	Degrees	✗
FLARM THREAT RELATIVE ALTITUDE	The relative altitude of the threat object.	Meters	✗
FLARM THREAT TIME TO COLLISION	The estimated time to a collision.	Seconds	✗
FLARM THREAT VERTICAL BEARING	The vertical bearing towards the threat.	Degrees	✗

1. PFD (Primary Flight Display)

- Velocidad
  - `AIRSPEED INDICATED`
  - `AIRSPEED TRUE`
  - `AIRSPEED MACH`
- Altitud
  - `PLANE ALTITUDE`
  - `PRESSURE ALTITUDE`
  - `VERTICAL SPEED`
- Horizonte artificial
  - `ATTITUDE INDICATOR PITCH DEGREES`
  - `ATTITUDE INDICATOR BANK DEGREES`
- Indicador de rumbo
  - `HEADING INDICATOR`
  - `PLANE HEADING DEGREES GYRO`

- **Indicador de viraje**
  - `TURN COORDINATOR BALL`
- **Indicador de desviación vertical**
  - `GLIDE SLOPE ERROR`

2. MFD (Multi-Function Display)

- **Mapa en movimiento**
  - Las variables específicas para el mapa pueden estar ligadas al movimiento del avión y su posición en el GPS:
    - `GPS POSITION LAT`
    - `GPS POSITION LON`
- **Plan de vuelo**
  - Variables del **FMS**:
    - `GPS FLIGHT PLAN WP INDEX`
    - `GPS FLIGHT PLAN WP LAT`
    - `GPS FLIGHT PLAN WP LON`

- **Información del motor**
  - `ENG RPM:1` (Revoluciones por minuto del motor)
  - `GENERAL ENG OIL PRESSURE:1` (Presión de aceite)
  - `FUEL TOTAL QUANTITY`
- **Navegación**
  - `GPS WP DISTANCE` (Distancia al waypoint)
  - `NAV ACTIVE FREQUENCY:1` (Frecuencia activa del NAV1)
  - `NAV RADIAL ERROR:1`

3. Autopilot y sistemas de navegación

- **Autopilot activado/desactivado**
  - `AUTOPILOT MASTER`
  - `AUTOPILOT ALTITUDE LOCK`
  - `AUTOPILOT HEADING LOCK`
- **Altitud del autopilot**
  - `AUTOPILOT ALTITUDE LOCK VAR`

- **Rumbo del autopilot**
  - `AUTOPILOT HEADING LOCK DIR`
- **Velocidad vertical del autopilot**
  - `AUTOPILOT VERTICAL HOLD VAR`

4. ILS (Instrument Landing System)

- **Frecuencia del ILS**
  - `NAV ACTIVE FREQUENCY:1` (Frecuencia del receptor NAV 1)
- **Desviación de localizador**
  - `NAV CDI`
- **Desviación de pendiente de planeo**
  - `NAV GS ERROR`

5. Sistemas adicionales

- **TAWS**
  - `TERRAIN AWARENESS WARNING` (Si se soporta en el modelo de avión)
- **TCAS**
  - `TRAFFIC NEAREST DISTANCE`
- **WX Radar**
  - Los datos del radar meteorológico pueden estar modelados con variables más complejas, pero usualmente estarán basados en `AMBIENT WIND` o `AMBIENT TEMPERATURE`.