



# USER MANUAL

# CONTENT

- Detail Panel 2D Cockpit ..... 3
- Detail Virtual cockpit ..... 12
- Starting engines ..... 13
- Speed references ..... 15
- Checklist ..... 16

This product has two mode panels: 2D or Virtual cockpit. Every panel will be explained here and we hope you know all functions included. We warning about this functions are no real with the real plane (obviously not apply for real flights), only apply to fly in the MICROSOFT® FLIGHT SIMULATOR X and you enjoy it.

### Detail Panel 2D

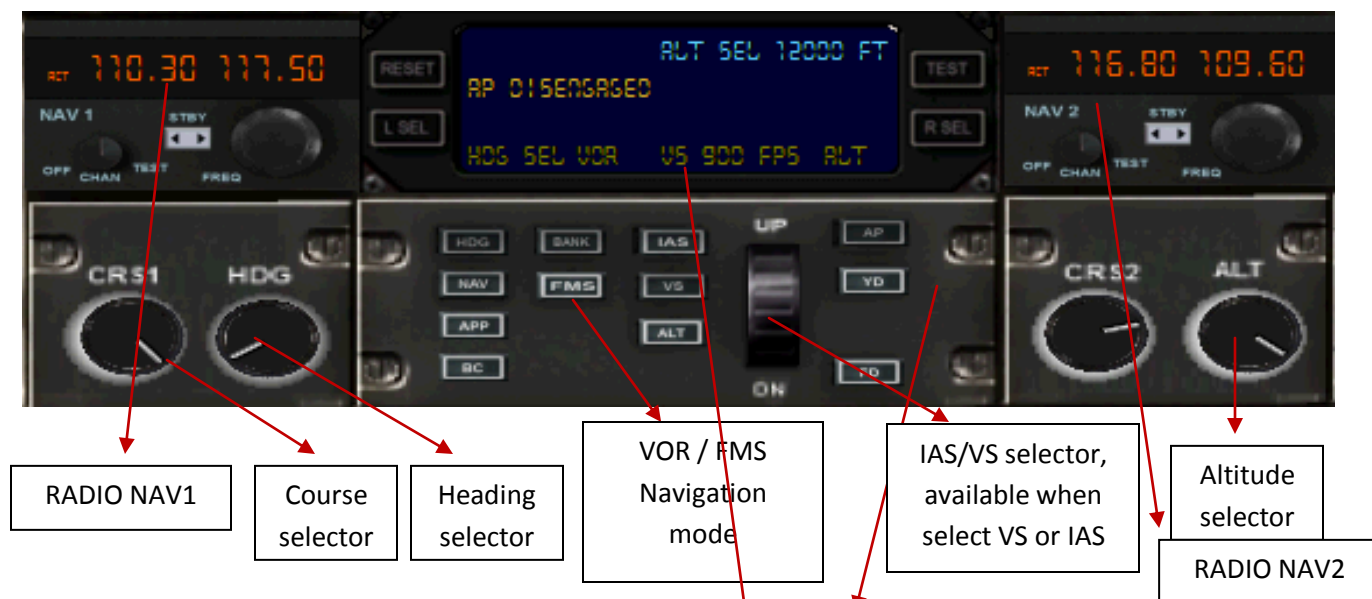
Starting the flight with this airplane, this is the initial vision of the panel 2D to allows excellent visual to front. Click on the arrow **DOWN** to expand the panel full.



When the panel expanding you may to see the panel so:



The AUTOPILOT PANEL is located up on the main panel. This is the detail of the panel:



#### AUTOPILOT FUCTIONS

**HDG:** Heading, **NAV:** Navigation VOR or FMS, **APP:** Approach, **BC:** Back course, **BANK:** Bank correction, **IAS:** Climb or descent maintain IAS, **VS:** Climb or descent maintain Vertical speed, **ALT:** Hold altitude, **AP:** Autopilot Master switch, **YD:** Yaw dumper, **FD:** Flight director.

#### ADU - AUTOPILOT DISPLAY UNIT

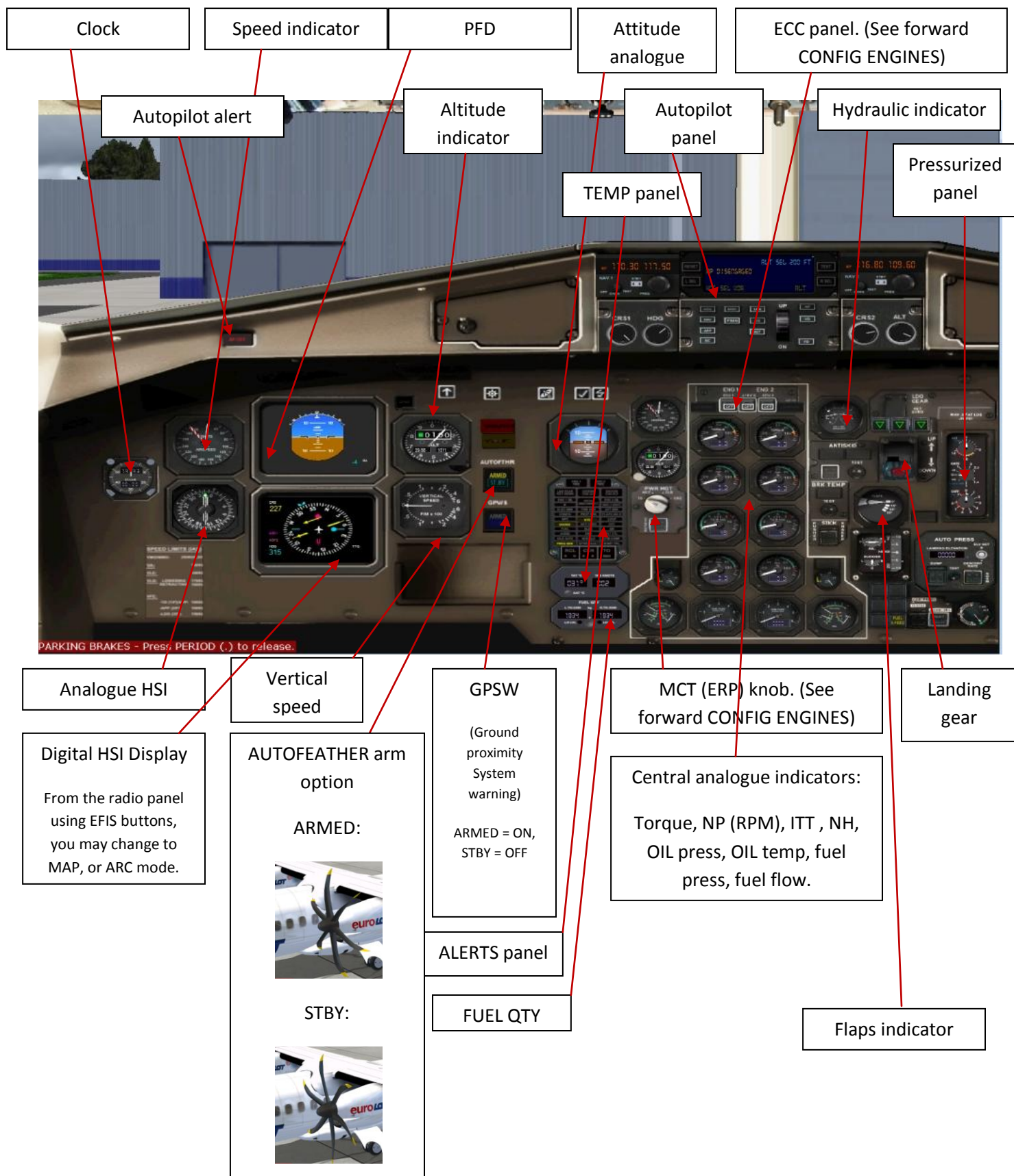
It shows activity of AUTOPILOT PANEL. First line is indicated ALTITUDE SELECTED, second line ALERTS as AP DISGANGED (autopilot not activated), YD DISGANGED (Yaw dumper not activated), FD DISGANGED (Flight director not activated). Third line is indicated when is selected a function, for example HDG for Heading or VOR for NAV or LNAV for FMS. Final green line is options in capture mode or not selected yet and VS or IAS selected when is activated VS button or IAS button.

#### Simulator ICONS, manage the views of the panels

	Down frontal views (Down panel)
	Open Overhead panel *
	Open Radios and FMS panel *
	Open Throttle panel
	Open MAP *
	Open Checklist *
	Active / Inactive Ground service (only on ground) *

\* Available in Virtual cockpit too.

## MAIN PANEL (Series -320, -320F and -500)





## MAIN PANEL (Series -600)

TRQ (torque), NP (RPM) ITT, NH, OIL pressure and OIL temperature indicators, ALERTS, FLAPS position, TRIM position.

FUEL qty by tank and total.

MCT (ERP) knob. (See forward CONFIG ENGINES)

ECC panel. (See forward CONFIG ENGINES)



AUTOFEATHER and GPSW

### Primary flight display (PFD)

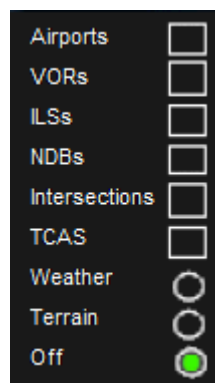
- Airspeed indicator
- NAV mode and info next navigation point.
- Attitude indicator
- HSI indicator
- Altitude indicator
- Vertical speed indicator

### PFD Selectors

- HSI Mode (Needle: FMS , ADF1, NAV1, OFF)
- Altimeter baro selector

### MAP GPS flight display

- **MAP:** Open map options. Click on the verify box to active visuals on the MAP display.

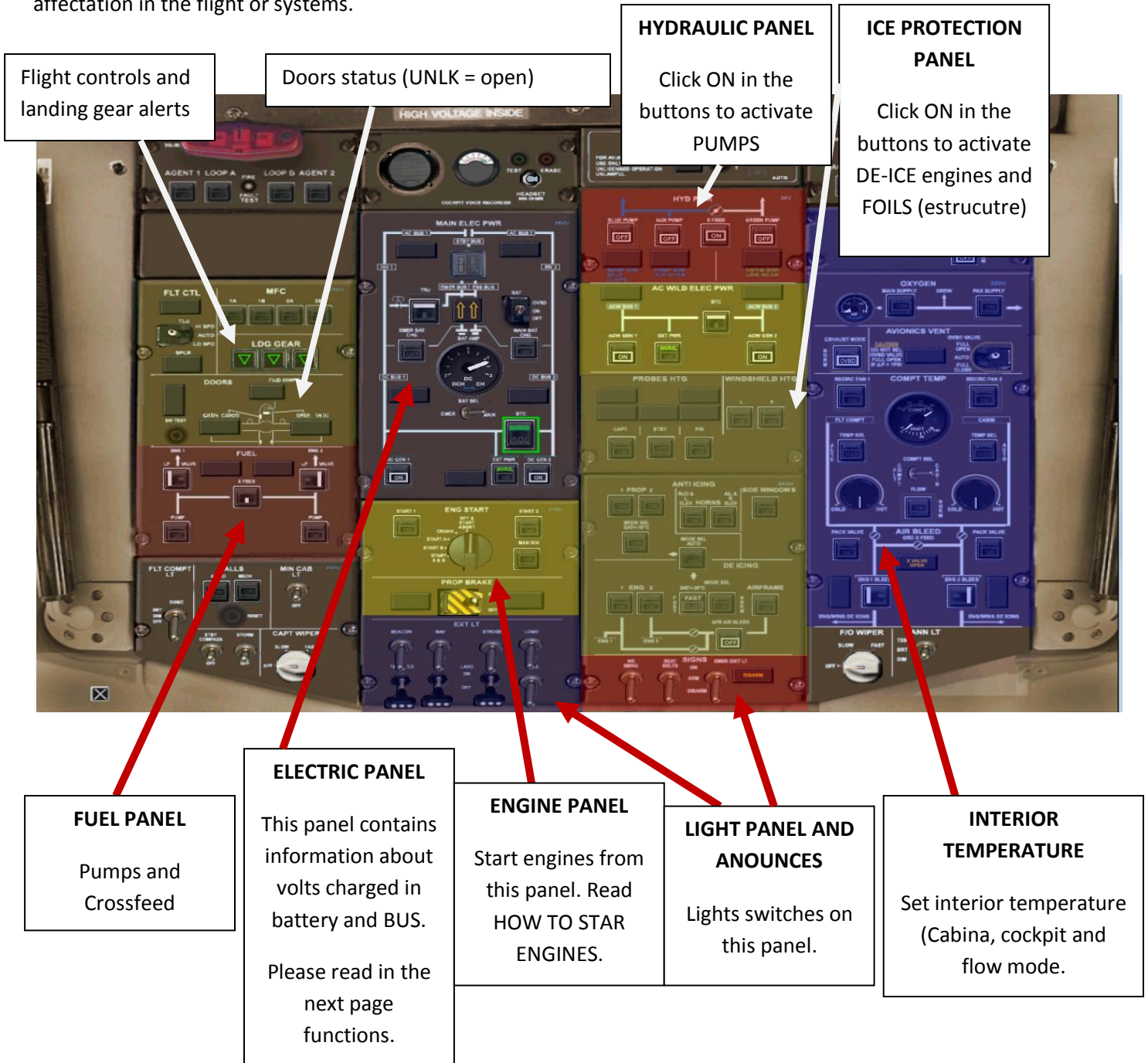


- **FPL:** Show Flight plan generated and modified in FMS.
- **TERR:** Show terrain
- **-/+:** Zoom OUT or IN.

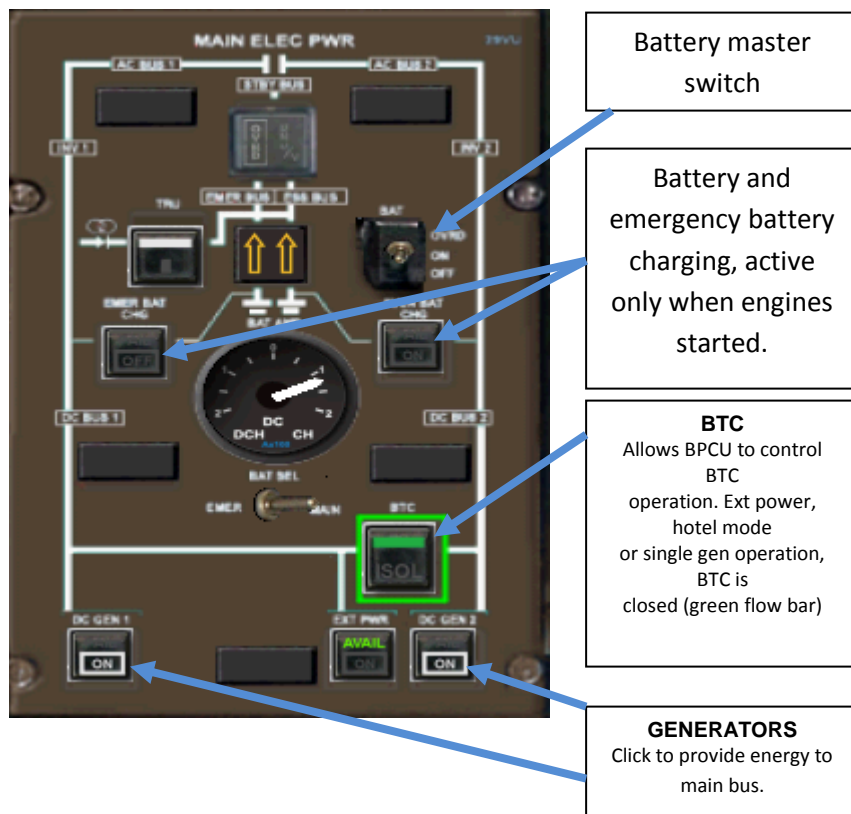
### Analogue Altitude Indicator

## OVERHEAD PANEL

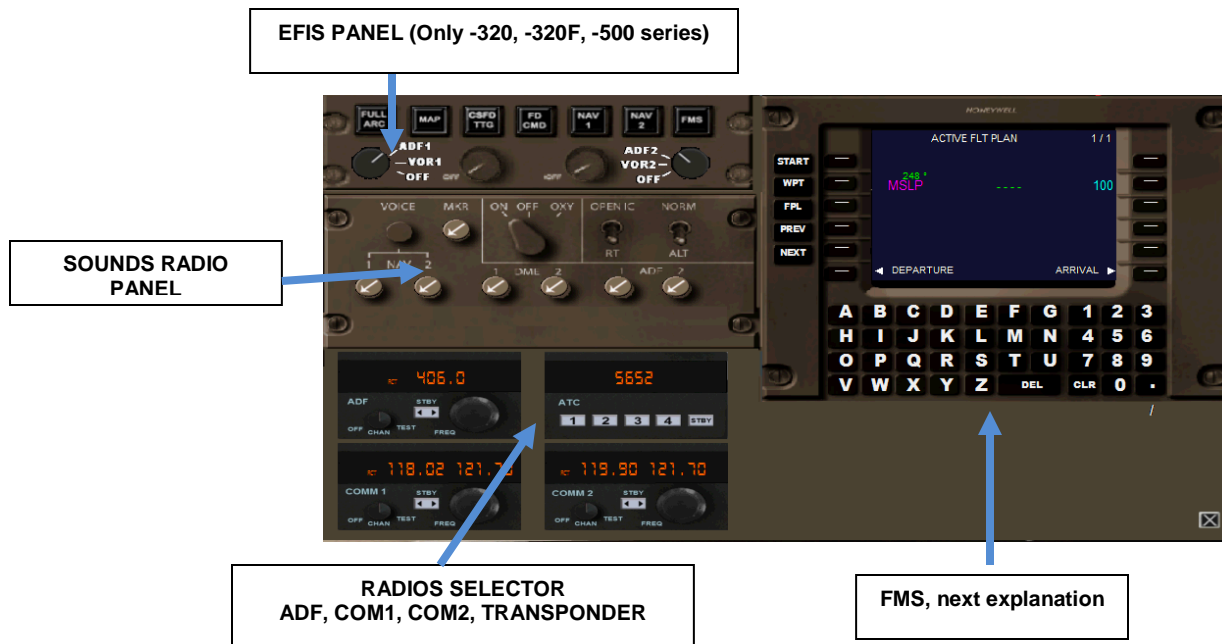
Not all buttons and functions work in this panel. Next we show what areas and panels and their functions. Basically is MORE important ELECTRIC PANEL, ENGINE PANEL, ICE PROTECTION PANEL and LIGHTS PANEL because all functions are very important in the flight, but the others contains “dummy” selectors to follow a checklist but without affectation in the flight or systems.



## ELECTRICAL PANEL

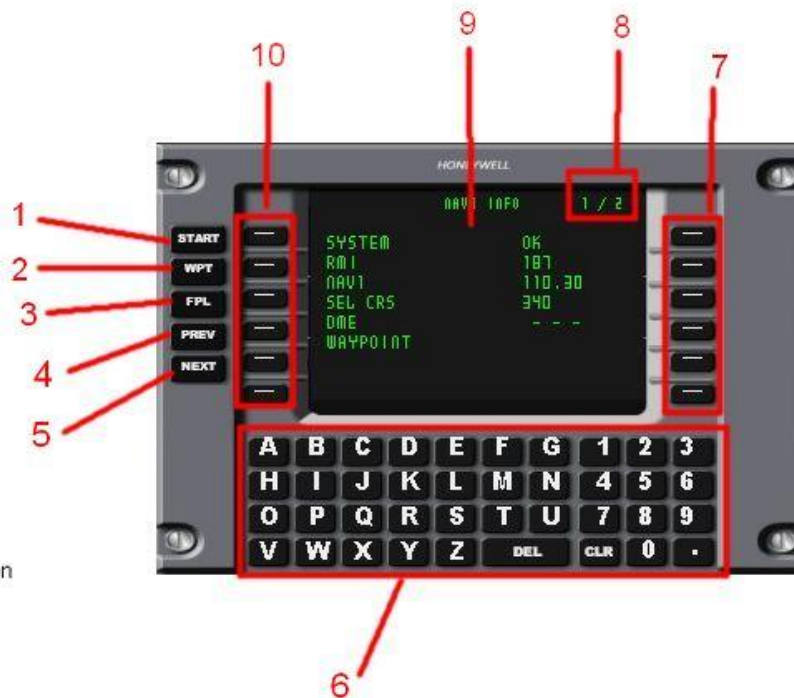


## RADIOS, EFIS SELECTOR AND FMS PANEL





# FMS Panel



- 1 - Start page FMS
- 2 - Next waypoint information
- 3 - Flight plan active
- 4 - Previous page
- 5 - Next page
- 6 - Keys
- 7 - Select options
- 8 - Page number
- 9 - Display info
- 10 - Select options

## FMS Panel

### NAV INFO MODE (START PAGE)

This mode allows to get info about the NAV1 frequency selected.

Este modo permite obtener información acerca de la frecuencia NAV1 seleccionada.



### BASIC INFO (Page 2 in the start mode)

This info show information like DATE, ZULU HOUR, LOCAL HOUR, ATC FLIGHT, AIRLINE, ATC ID and Model reported by transponder.

Esta información muestra la FECHA, HORA ZULU, VUELO, AEROLINEA, MATRICULA y modelo.



# FMS Panel

## INFO NEXT WAYPOINT MODE

This mode show the information about the next waypoint in the FLIGHT PLAN. This information allows to reference the next waypoint if the pilot doesn't wish continue with FMS mode and change to NAV or HDG mode.

Este modo muestra información sobre el siguiente punto en el plan de vuelo. Esta información permite referenciar el siguiente punto si el piloto no desea continuar en modo FMS y cambia a NAV o HDG.



## FLIGHT PLAN MODE

This mode show the flight plan with all info about the route. This FMS doesn't allow use VNAV, only LNAV, but the pilot can change the altitude in the waypoint like reference for the flight.

This mode also allows select DIRECTO TO any waypoint of the flight plan or insert and delete waypoints in the list.

Este modo muestra el plan de vuelo con toda la información sobre la ruta. Este FMS no permite VNAV, pero el comandante puede cambiar la información de altitud del punto como referencia del vuelo.

Este modo también permite seleccionar DIRECTO a algún punto del plan de vuelo, o incorporar o eliminar puntos de la lista.



## HOW INSERT OR DELETE POINTS IN THE FMS

Is very easy:

Only click in the button at right side (-) on the line where you need insert the point. Next you put the name point using the FMS keyboard. If the point exists, it will be showed, just select type of point: Airport, Fix, VOR, NDB, etc. The navigation point will be inserting. If you need DELETE, click the button at right side of the NAV POINT and press DEL button in the FMS keyboard.

## EFIS PANEL (Available only series -320, -320F and -500)



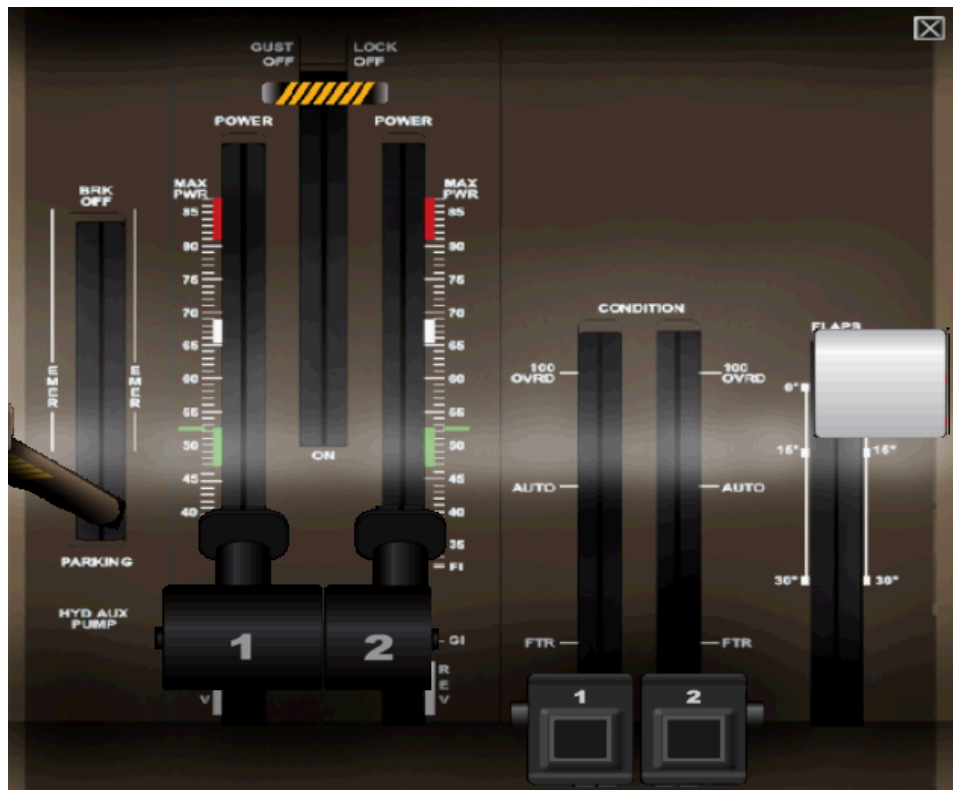
This panel allows handling information in HIS display. Up is showed how some buttons works, but options as GSFD show in the HIS display information about GROUND REAL SPEED and TTG the estimated time to arrive to the next point. FD/CMD is same fuction as the AP button FD (Flight director) to active or inactive this service and finally NAV1 button shows in the HIS panel DME to NAV1 VOR, or NAV2 and FMS the next point selected and distance.

This panel is available only in series -320, -320F and -500, because in -600 is showed in PFD display screen al information.

## THROTTLE PANEL

This panel only allows handing THROTTLE levers, Condition fuel levers, flaps lever and Parking Brakes lever. This model allows using CNTRL+E to star engines, moving condition fuel levers from your Yoke levers or throttle hardware. Also put the mouse over every lever and move as you need.





## DETAIL VIRTUAL COCKPIT

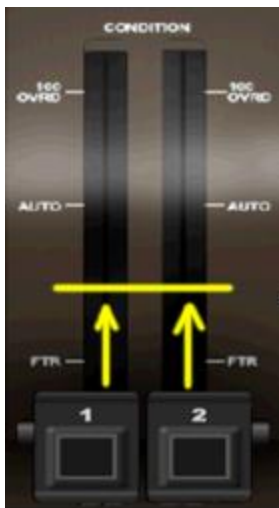
All the options indicated before in the 2D panel were translate to the Virtual cockpit too. The functions available in the 2D panel are available in the Virtual cockpit. If you wish to fly from the Virtual cockpit, don't worry, it's possible or select 2D cockpit, as you need, as you wish, no limitations exist.







## STARTING ENGINES



To difference of the others Virtualcol versions, this airplane allows start engines using CNTRL+E if you wish. However, if you is the virtual pilot enjoy follow checklist to star engines, you can do too. Inclusive if you want star engines with simple steps, follow this simple procedure step by step:

First, set the CONDITION FUEL LEVERS to 30% position, NOT FULL because when you need taxi to runway, it will be impossible control the speed on ground to taxi. Put condition fuel levers UP and FULL only before to take off. On the ground set here.



Second, rotate knob ENG START to option START A&B, just click on the knob, and it rotate to start A&B and click on the button START Left engine or Right engine as you choice.

When the engine start, the button START will pass to OFF and the knob will return to OFF too.

Finally, click on the buttons

## CONFIG ENGINES

If you have our model FOKKER 50 you know this model use a ERP configuration to set automatically torque and RPM based temperature, altitude and wet. This aircraft use same configuration to avoid damages in the engines, but this model hasn't the error to shut off engines if this configuration is not selected. However we suggest set every time this configuration before to TAKE OFF, while climbing, cruise and approach.

ATPCS OFF in ECC panel. Torque and RPM (NP) is 100% applied.



ATPCS ON, Torque and RPM (NP) is controlled by ECC and MGT panel.



When the ATPCS control is ARMED and ECC1 and ECC2 is ON (lights off) the MGT will control the torque and RPM in engines. ECC1 controlling engine left (1) and ECC2 controlling engine right (2). Please read the values applied when the POWER MGT is applied.

PWR MGT in –

TO: → NP 100% and 0,9 RTO → TQ up to 90%

MCT: → NP 100% and TQ up to 100%

CLB: → NP 82% and TQ up to 109,7%

CRZ: → NP 82% and TQ up to 108,3%

Reversion in manual mode when EEC FAULT (green band <52°) .

In the ALERTS PANEL will be announced as CONFIG if the pilot not set this configuration.

#### **CONDITION SPEED AND FLAPS SPEED REFERENCE**

Take off	130 Knts
Approach minimum	110 Knts
Approach maximum	150 Knts
Stall	80 Knts
Flaps 15	180 Knts
Flaps 25	160 Knts
Flaps 35	150 Knts

## CHECKLIST

### AFTER ENGINES START CHECKLIST

(Overhead)	
Landing Gear Lever	CHKD
DOORS ALERTS	OFF
FUEL PUMPS	OFF
FUEL XFEED	OFF
Master Battery Switch	ON
GENERATOR1	OFF
GENERATOR2	OFF
EXTERNAL POWER	OFF
EXTERNAL POWER AC	OFF
HYDRAULIC XFEED	ON
HYDRAULIC pumps	ON
Anti-ice	CHKD
OXYGEN Cabin pax supply	ON
OXYGEN Cockpit supply	ON
Cabin Temperature	CHKD
NAV Lights	ON
BEACON lights	ON
STROBE Lights	ON
(Main Panel)	
Altitude selected	SET
Radios NAV1 and NAV2	SET
Power MGT Knob	SET TO
ATPCS switch	OFF
ECC1 Switch	OFF
ECC2 Switch	OFF
AUTOFEATHER Switch	STBY
GPSW Switch	STBY
Fuel qty	CHKD
(Throttle panel)	
Throttle	IDLE
Parking Brakes	SET
Fuel Cond. Lever	FUEL
CUTOFF	
Flaps	UP
Flight controls	CHKD
(Radios panel)	
FMS Plan	SET
Radios frq. ADF, COM1 and COM2	SET



## ENGINES START CHECKLIST

Engine and Propeller Area	CLEAR
Throttle	IDLE
Fuel Cond. Lever	AUTO
Doors alerts	OFF
Engine Start Selection Switch	START A+B
Start Button Engine 2 START	ON
Generator 2	ON
Start Button Engine 1 START	ON
Generator 1	ON
Engine Start Selection Switch	OFF

## TAXI CHECKLIST

TAXI lights	ON
ELEVATOR TRIM	ZERO
AUTOPILOT	OFF
YAW DUMPER	ON
FLIGHT DIRECTOR	ON
FASTEN BELTS Anunciator	ON
NO SMOKE Anunciator	ON

## BEFORE TAKE OFF CHECKLIST

Power MGT Knob	SET TO
ATPCS switch	ARMED
ECC1 Switch	ON
ECC2 Switch	ON
AUTOFEATHER Switch	ARMED
FLAPS	15
LANDING Lights	ON
Throttle	IDLE
Anti-ICE	AS REQ
Alert lights	CHKD

## AFTER TAKE OFF CHECKLIST

Landing Gear	UP
FLAPS	UP
Landing and Taxi Lights	OFF
Autopilot	SET
Cabin pressurization	SET
Power MGT Knob	SET CLB
Condition Fuel Levers	FULL
GPSW Switch (Over 1000 FT on ground)	ARMED

## CRUISE CHECKLIST

FASTEN BELTS Anunciator	ON
FUEL Qty	CHKD
Anti-ICE	AS REQ
Cabin pressurization	CHKD
Pitot heat	CHKD
Power MGT Knob	SET CRZ

## BEFORE LANDING CHECKLIST

FASTEN BELTS Anunciator	OFF
Landing and Taxi Lights	ON
FLAPS over 180 knts	SET 15 deg
FLAPS over 160 knts	SET 25 deg
FLAPS over 150 knts	SET 35 deg
Power MGT Knob	SET MCT
Landing Gear	DOWN
Parking brakes	OFF

## AFTER LANDING CHECKLIST

FLAPS	UP
Landing Lights	OFF
Condition Fuel Levers	FTR
Strobe Lights	OFF
Anti-ICE	OFF
GPSW Switch	OFF

## SHUTDOWN CHECKLIST

Parking brakes	SET
Taxi Lights	OFF
Throttle	IDLE
Flight Director	OFF
YAW Dumper	OFF
BEACON Lights	OFF
STROBE Lights	OFF
Condition Fuel Levers	OFF
Power MGT Knob	SET TO
ATPCS switch	OFF
ECC1 Switch	OFF
ECC2 Switch	OFF
Master Battery Switch	ON
GENERATOR1	OFF
GENERATOR2	OFF
FASTEN BELTS Anunciator	ON
NO SMOKE Anunciator	ON