



## FS2004 Bombardier Learjet 45 v4.0 Panel by David Durst



Here is my updated Bombardier Learjet 45 panel for FS2004. This panel was originally created back in FS98 and had actually won a plaque from FlightSim.com for best developer back then. I have tried an update back in FS2002 and then just left it alone until recently when I decided to try another update. This update brings all new gauges in .XML format for the entire panel along with sub menus and traffic advisories in the MFD.

Also I have reworked the panel bitmap and re-arranged some of the gauges for a more functional layout. Most of the panel is self-explanatory on how things work and where the clickable areas are so let's move on to the important stuff.

## PFD Display -



Areas in Yellow are toggle area's on the PFD and Display Controller on glare panel are as follows

1. Bottom left PFD DH Select and DH select toggle box (shows up over current rad alt readout)
2. Bottom right Baro quick setting and adjustment

When FMS button is pressed on the EFIS Display Cont., the Nav/DME readouts in green left side of PFD will toggle with Nav 1 setting or current GPS route set. HSI needle will turn Magenta

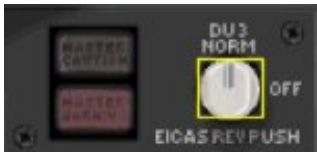
When CUE is buttons is pressed on the EFIS Display Cont. The attitude bars and FD are changed between cross pointer and Cue command bars

Bearing needles display are configured on the EFIS Display Cont. and show on the PFD in blue and white needles along with the function to the left of the HSI compass rose

In/hPA button on far left of EFIS Display Cont. will toggle Baro readout on PFD from IN to MBAR

TCAS button on display cont will always be lit

## EICAS/MFD Display toggle -



Default startup of the panel is with the EICAS display on the pilot side and the MFD display on the co-pilot side

Pressing the EICAS Rev display knob shown above will toggle the MFD to the pilot display and the EICAS display to the co-pilot side

The EICAS display has 4 menu's associated with it and are toggled by pressing the buttons on the lower part of the display.

The MFD has 3 menu's associated with it and are associated with it and are toggled by pressing the buttons on the lower part of the display when showing the MFD. Also the range for the moving map is toggled by the RNG button when the MFD is showing.

Both EICAS and MFD show the summary display at startup as the main lower part of the display

EICAS Display -



EICAS screens shown above are explain in more detail below



## **EICAS Display -**

The upper part of the EICAS display shows engine detail, fuel information for each tank and pitch trim/flaps info.

On the right top of the EICAS display is the CAS display.

The lower part of the display shows summary of electrical, hydraulic/ecs and flight trim information

The EICAS Display has 4 sub area's within it that shows more detailed information for Electrical, Flight Controls, Fuel and Engines

The Electrical screen shows basic electrical for bus #1 and bus #2 of DCv, Amps and Battery in a graphic display as well as status of the left and right generators

The FLT page or flight controls shows status of all flight controls and including spoilers and flaps setting in a graphic display

The Fuel screen shows total fuel in pounds available as well as fuel for each tank and also has a fuel used counter that can be reset by clicking in the yellow square area to the left of Used under the tank displays

The engine page shows various engine variables such as Oil Temp, Oil Pressure, Vibration and Bleed system PSI

## **Standby Instruments -**



The Standby instruments are located between the pilot and co-pilot inboard displays. They are Airspeed, Attitude and Altimeter. The Baro pressure can be set by the knob on the Altimeter as well

## MFD Display -



MFD screens shown above are explain in more detail below

## MFD Display -

The MFD has 3 sub area's on it and are the MFD configuration for moving map, The reference screen for checklist for the aircraft and TCAS screen each with its own clickable area's in yellow as shown

Moving Map range is shown on the main screen at the edge of the half circle surrounding the aircraft

The MFD setup screen will allow you to toggle on or off the different map settings that show up on the main MFD screen

The Reference speed screen shows some basic take off, landing, flap speeds for the Learjet45 and each checklist can be viewed by clicking in the yellow box for that screen as shown above

The TCAS screen range is set via the area at the bottom of the screen the open TCAS window range is 2nm to 20nm and is shown in the upper right of the TCAS screen. For more on the TCAS see end of this document

Note: the MFD display on the far right side of the panel (Co-Pilot display) will display the same range setting as the MFD on the pilot side.

## Warning display panel -



Currently not being used and will be enabled at some point in an update to the panel

## Radios Com1 and Com2 -



## Autopilot Panel -



**FD 1/2 buttons** — The flight director buttons (FD 1 and FD 2) are located on the upper left/right corners of the flight guidance controller.

**Course set knobs** — A course set knob (CRS 1 and CRS 2) is located at each end of the FGC.

**Heading set knobs** — Heading is selected via a rotary knob, with a “Heading Bug” symbol on the face of the knob.

**ALT set knob** — The left and right side of the knob is for Altitude selection, the top and bottom are for vertical speed selection

**SPD (speed) / MCH (mach) knob** — The rotary SPD knob is used to change the IAS/Mach speed reference

**HDG (heading) button** — Depressing the HDG button engages the heading mode

**NAV (navigation) button** — Pressing the NAV button alternately selects and deselects the navigation mode.

**APR (approach) button** — The intended function of the APR mode is that APR be used for all approaches,

**AP (autopilot) button** — Depressing this button engages the autopilot. Depressing a second time disengages the autopilot.

**YD (yaw damper) button** — Depressing this button engages yaw damper. The YD can be engaged independent of the AP,

**FLC button** — Depressing the FLC button once engages the Auto throttle’s for the engines

**ALT (Altitude Hold) button** — Altitude hold may be engaged by depressing the ALT button on the FGC.

**VNV button** — Depressing the VNV button arms, then captures the GPS for steering commands of the FDs and will display FMS on the top left of each MFD



## Throttle Display -



This panel should be self explanatory. Switches for Lighting, Fuel cutoff and Auto Engine start. Battery, Generators and heating/deice.

Also Spoilers, Flaps, Throttle and Parking brake along with landing gear indicator

## Radio Panel -



Clickable area's in yellow are Com1 and Com2, All com receive, ADF, Nav1 and Nav2 and Mute of the Marker tone

## **TCAS Information -**

Radar screen is set to display normal traffic and also give advisories based on distance of traffic.

There are two clickable areas on the display, the left top View/BRT will increase or decrease the brightness of the traffic on the display. The right top RNG will adjust the following distances – 3,5,10 and 20 NM miles

Traffic advisories – When traffic is within 1200 feet of the aircraft a yellow circle will appear for the traffic icon and TRAFFIC will be displayed in yellow on the lower right side of the display

Resolution advisories- When traffic is within 300 feet of the aircraft, a red square will appear and TRAFFIC will display in red on the lower right side of the display.

No other options are available at this time

Hope you enjoy this panel, if you have any questions feel free to contact me at one of the following –

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