

by David Durst



This is my updated Challenger 604 panel for FS2004. Originally created in FS98 and updated for FS2002, this panel update includes all new .xml gauges based off information from the real aircraft. The new PFD, MFD with sub screens and EICAS displays are similar to those on the CRJ with some differences. Bombardier did this to make transitioning between these aircraft easier for pilots.

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 -

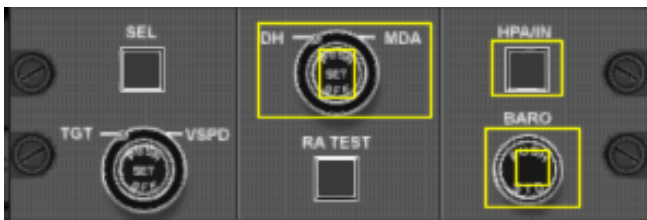


Top left section of PFD display shows mach airspeed if over .40 in white, middle section shows autopilot status lights as well as DH when toggled and altitude height set by ALT dial on autopilot.

Middle section shows airspeed on left, attitude with FD bars in middle, radar altimeter tape and current altitude of aircraft. Under the attitude display is current set airspeed, heading bug, radar altimeter and current baro in either hPA or In.


Bottom section left shows either Nav1 or FMS status when GPS is enabled and current nav setting for blue and white needles in the compass display. Trim indicator readout between the compass display and vertical speed display.

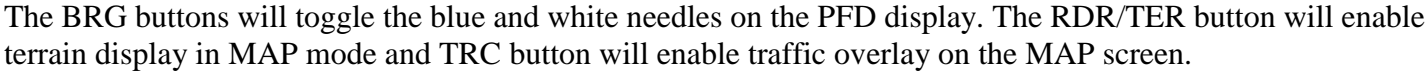
Clicking the following icon  will open up the PFD settings display panel as shown below.



This window will allow you to change the altitude of the DH on the PFD and will show or hide by pressing the middle of the DH button. To toggle between the hPA and In display on the PFD press the button on the top right labeled HPA/IN. The Baro knob will adjust altimeter setting as well as set STD altimeter setting by pressing in the middle

MFD Display -

The MFD display will show 4 different screens as noted below by pressing the Nav Source button. These are toggled by first clicking on the following icon  to open up the MFD display panel shown below



The FORMAT/RANGE toggles work separately for each screen in MAP, GPS and TCAS mode. The left and right range button will toggle range display in MAP, GPS and TCAS whilst the vertical range display will toggle TCAS range in MAP mode

The default MFD screen shows the HSI/VOR mode as shown below. All screens show the second line that has the UTC time, TAS, GS, SAT and TAT readouts.

The Nav information below is shown on the HSI/VOR screen as well as MAP screen. Wind speed and direction are shown on all screens except the TCAS screen

EICAS Displays -



The EICAS display is a single window display that shows engine information, gear status, flap status and fuel status. Also on the right side of the display a CAS (crew alerting system) shows status messages as needed for the aircraft.

The 604 EICAS differs somewhat from the CRJ series as the additional engine information is in text and the aircraft pitch, roll, rudder gear and flaps are all shown under the CAS information screen. The 604 Shows only flap information as it does not include slats. (At least not that I'm aware of)

The fourth display shows additional CAS information on the left side. The top right is for the APU (not simulated) and the middle right side has aircraft information for cabin altitude, pressure. The lower section has information brake temp (not simulated)



Autopilot Display -



The Autopilot is situated on the glare panel area of the cockpit. The following functions are available

CRS button — Clicking on the left or right of the button will change course display on PFD/MFD

FD button — Pressing this enables the Flight Director bars on the Attitude Indicator

AP ENG button — Pressing this will turn on the Master Autopilot mode

AP DISC button — Pressing this will turn off the Master Autopilot mode

SPD button and knob — Pressing the SPD button will enable the Speed hold only for the aircraft. Clicking in the middle of the speed button will enable the A/T function

APPR button — turns green when approach is captured

B/C button — Depressing the REV button enables the backcourse mode

HDG button and knob — depressing the HDG button engages the heading mode

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

YD button — Depressing the LVL button enables yaw damper on aircraft

ALT button and knob — Pressing this enable the Altitude hold feature of the autopilot

GPS button — depressing the GPS button will toggle the FS GPS on and off


The dial on the far right when pressing top or bottom will change the vertical speed hold indicator in the vertical speed window in the PFD

Standby Instruments -

The standby instruments are located above the MFD displays in the center of the panel. They include airspeed, attitude and altimeter.



Hud Display -

Clicking on the following icon  will open up the Hud Display as shown below.

The display will show Mag heading, wind direction and speed, airspeed, attitude and altimeter as well as the current heading, course and vertical speed of the aircraft.



Throttle Display - Clicking on the throttle icon  will open up the throttle panel



The throttle panel houses controls for the gear switch, spoiler, throttles, flaps as well as radio communications and dial for the panel lighting

On the left side of the radio display is a toggle button for each radio. Pressing the button to the left of the active frequency will surround either the standby or active frequency with a white box. Once that box is showing you use the tuning knob to the right of the display to adjust that radio. Clicking on the toggle button again disables the tuning of that radio.

On the right side of the display, the first two buttons will toggle the standby frequency with the active frequency.

The far right button will Ident Nav1 or Nav2 based on which page is showing and ID will show under the Nav2 or Nav2 words.

The far right button third from the top will toggle the radio page between Nav1 display and Nav2 display

Under the radio display is the Comms area. The far left buttons are Ident for Nav1 or Nav2

The middle big knob is for switching between Com1, Com2 and Receive all Comms

The button below is for Marker speaker toggle

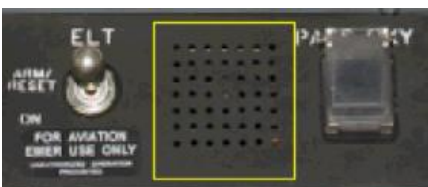
The knob on the right side of panel under lighting that is in yellow will turn on night lighting for the panel.

Overhead Panel –

Clicking this area in yellow will open up the overhead panel



To close the overhead panel click on the speaker area when the panel is open as shown below



The overhead panel is adjustable and the best way to set this up is to drag the panel so it shows on the screen when clicked as shown below



The overhead panel has the toggles for all lighting functions of the aircraft. The left side bottom is for taxi and landing lights and the area directly above is aircraft lighting except the panel lights which are on the throttle panel area. The taxi and landing lights are also shown in the secondary EICAS display when on.

Also by dragging the overhead panel out you get access to the icing toggles for the aircraft as shown below in yellow. The other functions of the overhead panel are not implemented at this time



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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