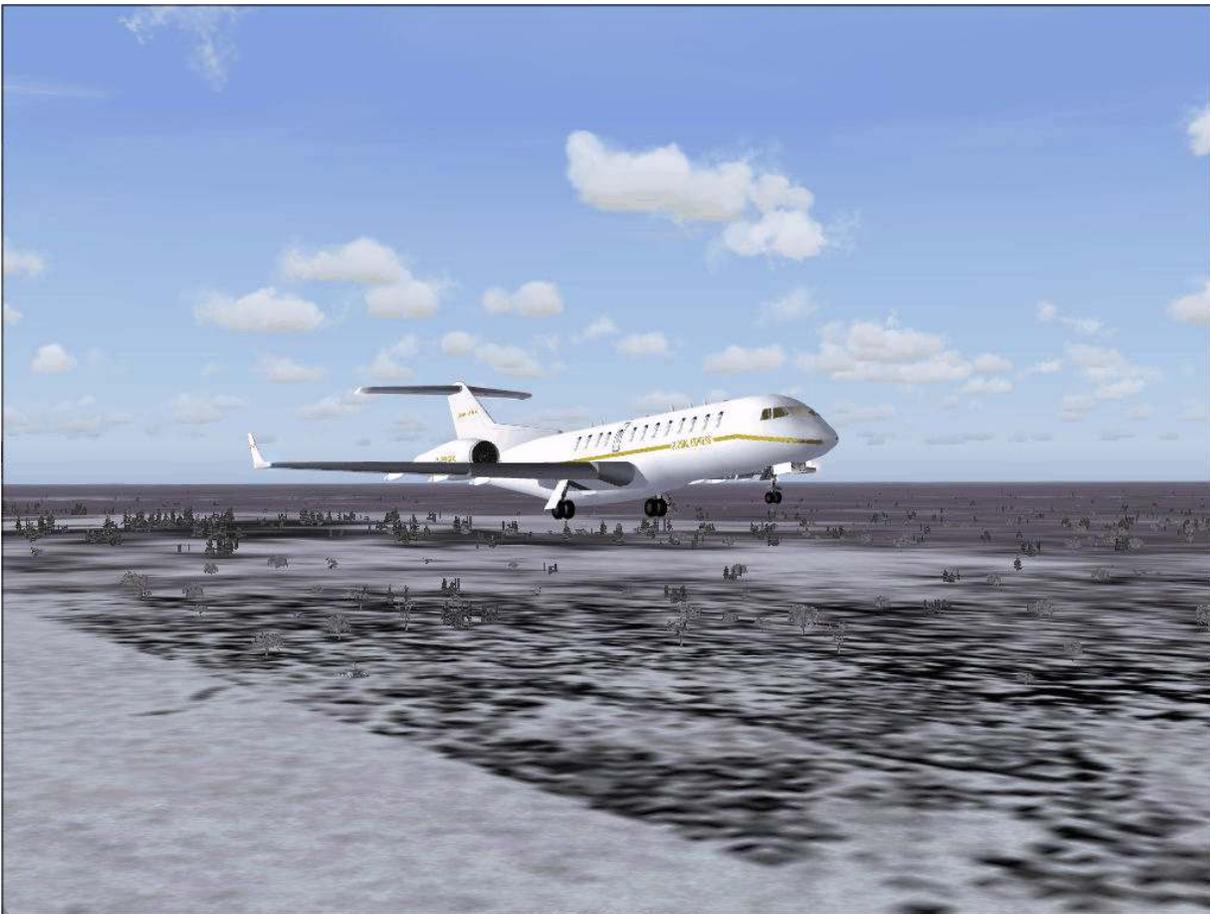


BOMBARDIER GLOBAL EXPRESS

The **Bombardier BD-700 Global Express** is an ultra long range corporate and VIP high speed jet which has also been modified for military missions.

Bombardier began studies in 1991 and the aircraft was officially launched in 1993. First flight occurred on October 13, 1996.

The Global Express can fly intercontinental ranges without refuelling (e.g. New York - Tokyo) or between any two points in the world with only one stop. In this class the Global Express competes with the Airbus Corporate Jet, Boeing Business Jet and Gulfstream V.



The Global Express package was designed for FS2004 and is released as freeware. It should work in FSX. The package contains model, sound, panel and textures. The aircraft features full animation, (gear, flaps, elevators, spoilers and opening door) and some special effects. The airfile is based on actual info of the aircraft.

The main panel was designed from photos of the Global Express, and features a full glass cockpit. All subpanels open from the main panel. All gauges were designed in xml format.

Special effects have been included in the aircraft and is fully described in the manual. Engine failure will result in incorrect flying procedures. It is triggered by means of a gauge designed specifically for this purpose. (ie RPM and EGT overlimits)

INSTALLATION

Run the included .exe , it will install the aircraft to the default directory, you can change it, the installer will install the aircraft to the correct folders. copy the contents in the contents_to_folder folder to the FS module folder.

EFFECTS

This aircraft has many built-in visual effects:

Important – please read !

In Flight Simulator ALL effects are triggered by light switches. To toggle a light on or off it's recommended to use the light switches on the overhead panel. Pressing 'L' on the keyboard will toggle ALL light switches, resulting in a spontaneous engine fire

Total air temperature above 142 degrees celsius and RPM above 31500 will toggle engine failure. Smoke will also be visible at the engines.

A warning light will be displayed if total air temperature goes over 135 d and when the RPM goes over 106 percent.

If your airspeed is over 250kts at the off and the gear is not retracted, damage will occur. If your flight speed is over 250kts and you want to retract the gear, damage will occur.

If your airspeed is over 225kts, and you open flaps over 50 percent, damage will occur.

PANEL

The panel was designed as close as possible within the restraints of FS



Toggle switches



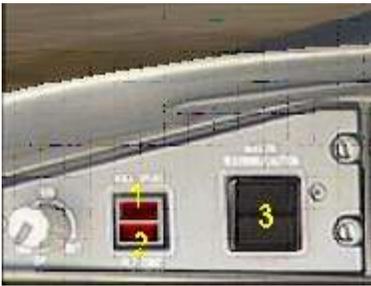
1. Open throttle
2. Open GPS
3. Open HUD
4. Open overhead panel
5. Open map and radar panel
6. Open ATC
7. Checklis

Autopilot



- | | |
|---------------------------|--------------------------|
| 1. NAV/GPS switch | 12. VS Selector |
| 2. Arc Rose switch | 13. VS switch |
| 3. Flight Director switch | 14. Altitude hold switch |
| 4. Course select | 15. Altitude selector |
| 5. Speed switch | 16. AP Master |
| 6. Speed selector | 17. Yaw Damper |
| 7. Nav switch | |
| 8. Localiser switch | |
| 9. Approach switch | |
| 10. Heading switch | |
| 11. Heading selector | |

Left Autopilot



1. Lim
2. Fire
3. Master warning

Left Panelgauge



- 1 Airspeed Indication
- 2 Altitude Indication
- 3-7, 15 Flight Director / Autopilot
- 8-11 Navigation Annunciation
- 12 Compass
- 13 BARO Set
- 14 Radio height
- 15 AP verticle sprred indicator
- 16 Vertical Speed Indication

Navpanelgauge



- 1 Nav compass
2. Altitude meter
3. Digital readouts

Standby instruments

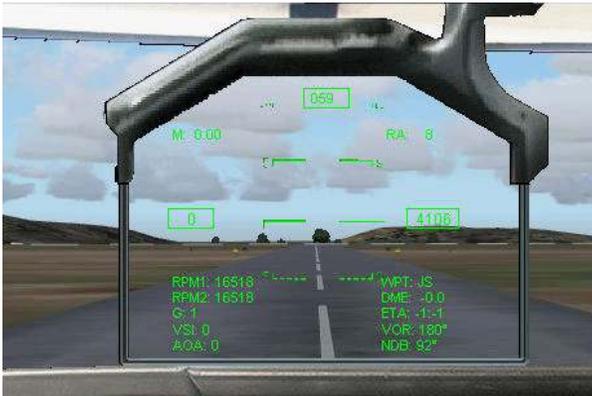


Standby ADI

Standby Altimeter

HUD digital readouts

All xml gauges are marked with tooltips.



Radar and Map Combination Gauge



Instrument Readouts



EPR

N1

ITT

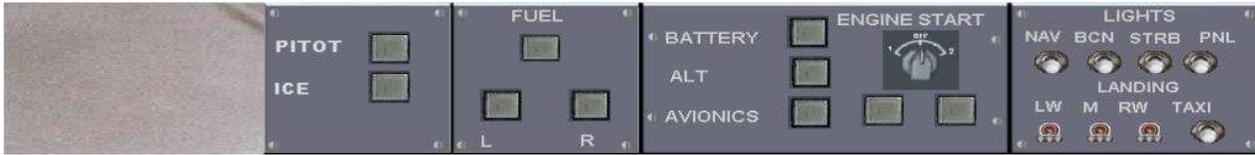
Fuel

Digital warnings (Engine failure, Ice, Pitout, Low height, Overspeed, Stall)

Gear

Trims indicators: stabilisor, rudder aileron

Overhead Panel



All gauges have been marked. I have tried to keep the subpanel as simple as possible

Throttle Quadrant



- | | | | | | |
|----|------------------------------|---|----------------------|-----|-----------------|
| 1. | Left engine digital readout | 4 | Radio 2 | 5. | Gearlever |
| 2. | Right engine digital readout | 1 | Com2 frequency swop | 6. | Gear safe light |
| 3 | Radio 1 | 2 | Nav 2 frequency swop | 7. | Skid brake |
| 1 | Com1 frequency swop | 3 | Com2 select | 8. | Autothrottle |
| 2 | Nav 1 frequency swop | 4 | Nav2 select | 9. | Warning test |
| 3 | none | 5 | ADF2 select | 10. | Autobrake |
| 4 | Com1 select | 6 | Xponder select | 11. | Spoiler |
| 5 | Nav1 select | | | 12. | Left throttle |
| 6 | ADF1 select | | | 13. | Right throttle |
| 7 | Xponder select | | | 14. | Left Fuel cut |
| | | | | 15. | Right fuel cut |
| | | | | 16. | Flap |
| | | | | 17. | Park brake |

Specifications

General characteristics

Crew: 2-4 (min, typical)

Capacity: 8-19 passengers

Length: 99 ft 5 in (30.30 m)

Wingspan: 94 ft 0 in (28.65 m)

Height: 24 ft 10 in (7.57 m)

Cabin length: 48 ft 4 in (14.73 m)

Cabin max width (centerline): 8 ft 2 in (2.49 m)

Cabin max width (floorline): 6 ft 11 in (2.11 m)

Cabin height: 6 ft 3 in (1.91 m)

Cabin floor area: 335 ft² (31.1 m²)

Wing area: 1,022 ft² (94.9 m²)

Empty: 49,750 lb (22,600 kg)

Payload (w/full fuel): 1,775 lb (805 kg)

Maximum takeoff: 98,000 lb (44,500 kg)

Powerplant: 2 [Rolls-Royce](#) Deutschland [BR710A2-20](#) turbofans, 14,750 lbf (65.5 kN) thrust

Performance

Maximum cruise speed: 950 km/h (590 mph) Mach .89

Typical cruise speed: 904 km/h (562 mph, 488 knots) Mach .85

Range (at typical cruise): 5,325 nm (11,390 km (7,080 mi)

Service ceiling: 51,000 ft (15,500 m)

Rate of climb: 1433 ft/min (436 m/min)

Wing loading: 95.9 lb/ft² (468 kg/m²)

Thrust/weight: 0.301

Balanced field length (SL, ISA, MGTOW): 6,120 ft (1,870 m)

Landing distance (SL, ISA, MLW): 2,670 ft (814 m)

General

The starter must not be used if indicated RPM exceeds 42% N2.

Maximum ambient air temperature approved for take-off and landing is +50 °C (113 °F).

Minimum ambient temperature approved for takeoff is -30 °C (-22 °F).

Maximum RPM: 106%

Maximum EGT (dependent upon altitude and OAT) : • During start: 675 °C to 1038 °C. • Normal: 613 °C to 732°C.

Slat/Flap Extended Speed

The maximum speeds at which the slats/flaps may be extended are:

- Slats extended: 225 KIAS
- Flaps to 6 degrees: 210 KIAS
- Flaps to 16 degrees: 210 KIAS
- Flaps to 30 degrees: 185 KIAS

Maximum Landing Gear Operating Speed

- The maximum airspeed at which it is safe to retract the landing gear is 200 KIAS.
- The maximum airspeed at which it is safe to extend the landing gear is 200 KIAS.

Maximum Landing Gear Extended Speed

The maximum airspeed at which the airplane may be flown with the landing gear extended is 250 KIAS / 0.7 M.

Flight Spoilers

- Flight Spoilers must be retracted below 300 feet AGL.

Real life checklist. This cannot be used with FS2004. I have made a checklist for FS2004/FSX available in the aircraft folder. It can be accessed via the checklist icon on the main panel

Flight Compartment Originating Check

- 1. Internal & external pre-flight checks Complete
- 2. Gear and safety pins.....On board
- 3. Pedals, seats and harnessAdjusted
- 4. Passenger oxygen NORMAL
- 5. Cockpit voice recorderTested
- 6. Mach transducer selector valveGuarded
- 7. ELTARM
- 8. Hydraulic panels and pumpsChecked / AUTO / 3A ON
- 9. Electrical panel Checked
- 10. IAC aural warning switchesGuarded / Out
- 11. Fuel panel Checked
- 12. Engine panel..... Checked
- 13. Bleeds / packs / anti-ice panel Checked
- 14. Pressurization panel Checked / Set
- 15. Windshield heat ON
- 16. External lights As required
- 17. Emergency lightsARM
- 18. Standby compass Checked
- 19. Glareshield panels Checked / Set
- 20. Stall pusher switches ON
- 21. Stall test Accomplish
- 22. EFIS / EICAS Checked
- 23. Standby instruments Checked
- 24. EGPWS switches..... Guarded /Out
- 25. RMU / TCAS As required
- 26. MFD control panels..... As required
- 27. Audio control panels As required
- 28. Cockpit lighting As required
- 29. Trims..... Checked / Engaged
- 30. DC override test..... Accomplish
- 31. Reversion control panelNORM
- 32. Ground lift dumpingAUTO
- 33. Engine switches..... EPR

B. Start Check

- 1. Crew oxygen masks and quantity (%) Checked
- 2. Passenger signs AUTO or ON
- 3. Altimeters..... Set
- 4. FMS / Take-off dataProgrammed
- 5. Trims..... Set for take-off
- 6. Radios / Nav aids.....Set for departure
- 7. Take-off briefing..... Complete
- 8. Doors Closed
- 9. HYDRAULIC pumpsAUTO / 3A ON
- 10. Parking brake..... ON
- 11. Beacon.....RED
- 12. CAS Checked
- 13. Engines..... Start

C. After Engine Start Check

1. APU OFF
2. Electrics Checked
3. Wing and cowl anti-ice..... Checked / As required
4. Slat / Flap lever..... Check / Set for departure
5. Flight controls Checked
6. Flight spoilers.....Checked / Retracted
7. Ground Lift Dumping..... Checked
8. NOSE STEER switch.....ARMED
9. Taxi lights..... As required

4. TAXIING AND TAKE-OFF

A. Taxi Check

1. Brakes..... Checked
2. Thrust Reversers (First Flight of the Day)..... Checked
3. Flight instrumentsChecked and set
 - Flight directorSet for take-off
4. Fuel quantity and balance..... Checked
 - XFEED SOV Closed
5. Slat / Flap lever.....Set for departure
6. Trims.....Set for departure
7. Weather radar (LSS)..... SBY

B. Take-Off Check

1. Wing and cowl anti-ice.....OFF or ON
2. External lights As required
3. Transponder and TCAS..... As required
 - Transponder 1 if the AFCS is coupled to ADC 1.
 - Transponder 2 if the AFCS is coupled to ADC 2.

NOTE

1. The AFCS should not be coupled to ADC 3 unless ADC 1 is failed (ADC 1 FAIL advisory) **and** Transponder 1 is selected.
2. Transponder 2 will not have Mode C altitude data if ADC 2 is failed (ADC 2 FAIL advisory).
4. Terrain As required
5. Weather Radar (LSS) As required
6. Take-off speeds Posted
7. CAS Checked

C. After Take-Off Check

1. Landing gear.....UP
2. Slat / Flap lever..... IN / 0
3. Wing and cowl anti-ice..... As required
4. CAS Checked

5. CLIMB, CRUISE AND DESCENT

A. Climb Check

- 1. Climb thrust..... Set
- 2. Pressurization Checked
- 3. Cabin signs As required
- 4. External lights As required
- 5. Altimeters..... Set

B. Descent Check

- 1. Landing elevation..... Set
- 2. Fuel quantity and balance..... Checked
- 3. Autobrake As required
- 4. Terrain As required
- 5. Weather radar (LSS)..... As required
- 6. FMS / Landing data Programmed
- 7. Radios / Nav aids..... Set for approach
- 8. Approach briefing..... Complete
- 9. CAS Checked
- 10. Altimeters..... Set
- 11. Pressurization Checked

6. BEFORE / AFTER LANDING

A. Before Landing Check

- 1. Landing gear..... Down and indicating
- 2. External lights As required
- 3. Passenger signs As required
- 4. Wing and cowl anti-ice..... OFF or ON
- 5. Flight spoiler lever..... Retracted
- 6. Slat / Flap lever..... Set for landing
- 7. CAS Checked

After Landing Check

- 1. Transponder STANDBY
- 2. Weather radar (LSS)..... OFF
- 3. Slat / Flap lever..... As required
- 4. External lights As required
- 5. Wing and cowl anti-ice..... As required
- 6. APU As required

7. SHUTDOWN

A. Shutdown Check

- 1. Chocks / Parking brake..... As required
- 2. APU GEN or external ground power..... Checked
- 3. Thrust Levers..... IDLE

After the engine three-minute cool down period:

- 4. ENG RUN switches OFF
- 5. Passenger signs OFF
- 6. Beacon and taxi switches OFF
- 7. Wing and cowl anti-ice..... OFF
- 8. NOSE STEER switch..... OFF

9. HYDRAULIC pumps OFF
For a quick turn-around, go to START CHECK.

B. Terminating Check

- 1. Chocks / Parking brake..... As required
- 2. IRS (all)..... OFF
- 3. NDU (Lasertrack)..... OFF
- 4. Windshield heat OFF
- 5. Emergency lights OFF
- 6. APUShutdown
- 7. External lights OFF

When the APU has shutdown (APU RPM <70%):

- 8. Battery master switch OFF
- 9. Area lights / Fuel / Oil panels..... OFF

Acknowledgements

This aircraft is dedicated to my son, Marthinus who is receiving cancer treatment. Son thanks for your positive outlook at life! You are an example to all of us.

Radargauge: Glenn Copeland. Thanks Glenn for the use of the gauge.

Airfile: Yahia al Wajid Thanks for finetuning and testing the airfile

DISCLAIMER AND USE

These files are intended for private entertainment purposes only. I will not accept any responsibility for damage or loss of data incurred directly or indirectly from the use of these files. These files may be copied, distributed, transmitted, uploaded or downloaded only as long as all files remain together and proper credit is noted. These files may not be modified, edited or otherwise be made to appear to be your own. Repainting will be allowed with the written permission of the author. No monetary gain may be made by the sale of these files in whole or in part. Inclusion of these files or any part thereof in CD form with other software as part of bundled shareware or freeware is strictly prohibited without the prior express written permission of the author of these files. By copying the content of this file to your flight simulator directories, you are agreeing to the terms of this disclaimer.

Copyright: Thinus Pretorius
Email: iti02763@mweb.co.za or thinus@gizone.org
March 2007