

E170-E175 *Series*



E190-E195 *Series*



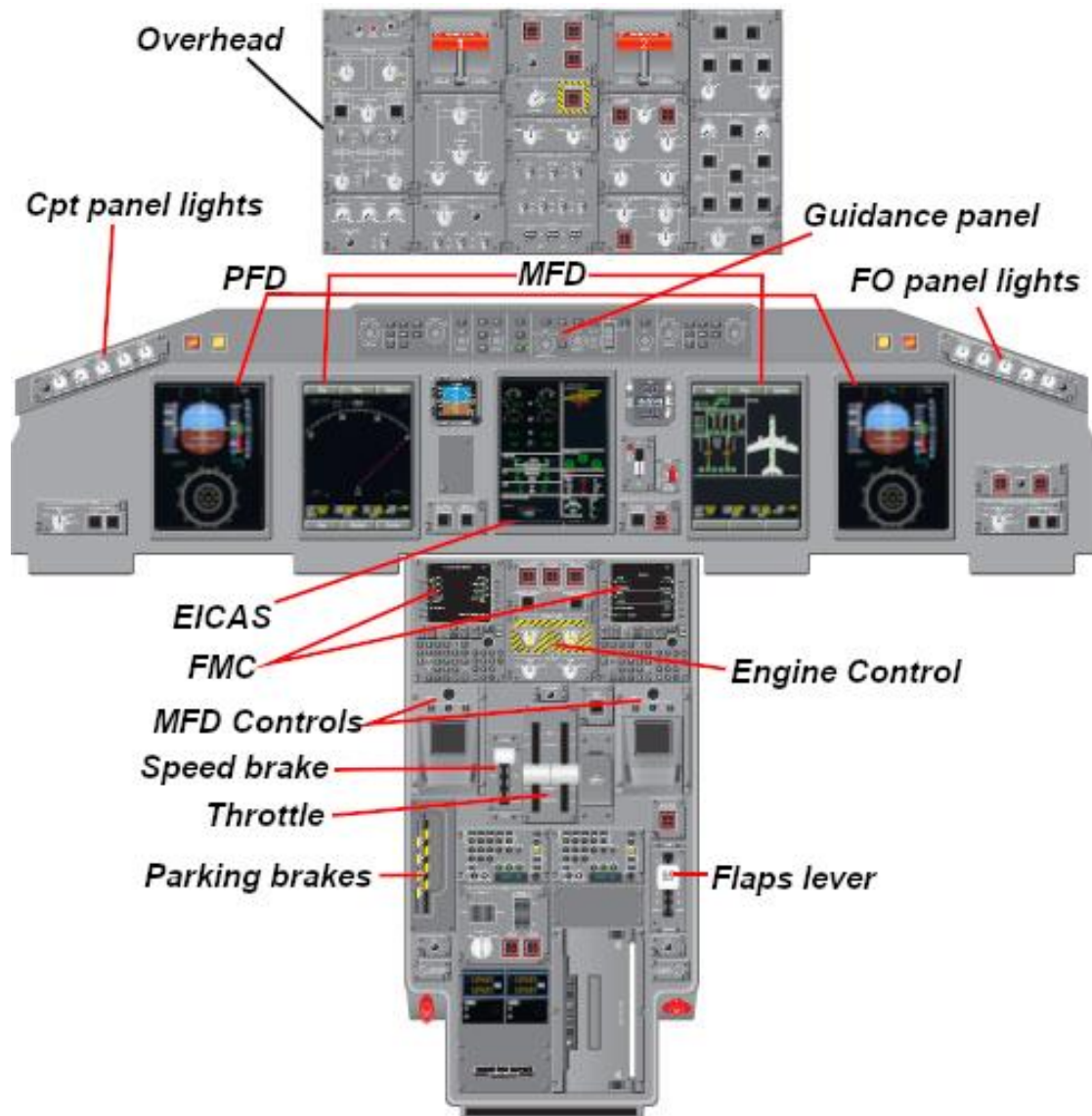
USER MANUAL

For use with Microsoft® Flight Simulator

CONTENT

- Cockpit distribution
 - Overhead
 - Guidance panel
 - Displays
 - FMC
- Starting engines procedure
- Taxiing, Takeoff and climb procedure
- Autopilot procedure
- **Approach procedure**
- Complete list of tutorials in video (Youtube)

Cockpit distribution



Overhead



Electrical panel

1. Generator 1
2. Generator 2
3. Ground Power Unit (Auxiliar power)
4. AC BUS TIES (Selector mode energize)
5. APU generator
6. TRU switches
7. Battery 1 (Main)
8. Battery 2
9. DC BUS (circuit of avionics)

Cockpit lights panel

10. Pedestal flood lights control
11. Cockpit lights (Dome)
12. Overhead flood lights control
13. Guidance and main panel flood lights control
14. Switch Cabin passenger lights

Hydraulic panel

35. PTU hydraulic control
36. Hydraulic pump engine 1
37. Hydraulic pump engine 2
38. Electric pump auxiliar 3A
39. Electric pump auxiliar 3B

Pressurization panel

40. Control cabin ALT
41. Selector mode pressurization
42. Pressurization climb rate

Anti-ice panel

43. Windshields deice
44. Deice engine 1
45. Deice wings
46. Deice engine 2
47. Pitot heat knob control

Passenger signs panel 15. Knob emergency lights 16. Sterile cockpits announce 17. No smoking announces 18. Seat Belt announces Fuel panel 19. Cross feed fuel 20. APU fuel pump 21. ENG1 Fuel pump 22. ENG2 Fuel pump APU panel and wipers panel 23. APU knob starter and Emergency APU stop 24. Wipers knobs External lights panel 25. Navigation lights 26. Stroboscopic lights 27. Red beacon lights 28. Logotype lights (Tail) 29. Taxi light nose center 30. Taxi lights sides 31. Recognition lights (wings) 32. Landing lights left side 33. Landing lights nose center 34. Landing lights right side	48. Test system Air conditioning panel 49. Cockpit selector temperature 50. Air recirculation 51. Cabin selector temperature 52. Air pack air from engine 1 53. Cross feed air from engines 54. Air pack air from engine 2 55. Engine 1 bleed 56. APU bleed 57. Engine 2 bleed Oxygen passengers panel 58. Control oxygen in masks 59. Deploy passenger oxygen masks See how to use this panel in the next video: Tutorial 1 - Before Starting Engines and inserting a flight plan in FMS Tutorial 3 - Cockpit lights and external lights
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Guidance panel



1. Barometric SET (syncs the current QNH) and selector
2. Barometric selector mode
3. BRG selector VOR1 or ADF1
4. BRG selector VOR2 or ADF2
5. TCAS active/inactive on MAP in MFD
6. Decision Height selector
7. Flight director switch
8. Sync course based in heading
9. Course selector (Only for LOC navigation)
10. Navigation FMS (LNAV) switch
11. Approach Glide Slope switch
12. VOR/LOC navigation switch
13. Heading navigation switch
14. Sync heading current
15. Heading selector

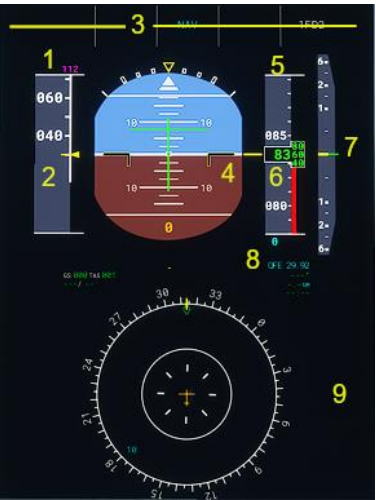
16. Autopilot master switch
17. Yaw dumper switch
18. Auto throttle switch *
19. Sync current speed and selector IAS/MACH value
20. Selector IAS/Mach mode auto throttle
21. Flight Level Change (Climb/Descend by speed) *
22. Vertical Navigation Speed (It's still under review)
23. Altitude hold switch
24. Flight Path Angle switch (It's still under review)
25. Altitude selector in hundreds
26. Altitude selector in thousands
27. Flight path angle selector (It's still under review)
28. Vertical Speed selector
29. Vertical speed (alt selector mode) switch

See how to use this panel in the next videos:

[Tutorial 6 - Autopilot procedure](#)

[Tutorial 7 - Approach procedure](#)

Displays



PFD

1. Airspeed hold selected (See guidance panel # 20)
2. Current airspeed (IAS) Below is shown in GS (Ground speed) and TAS (True speed)
3. Guidance panel information
4. Attitude indicator
5. Altitude holds select (see guidance panel #25 and #26)
6. Current altitude
7. Current vertical speed
8. Current barometric pressure selected (See guidance panel #1)
9. RMI* and map of route

* The Rose mode will be modified according to the chosen navigation mode.



MFD

1. Map menu
2. Flight plan view
3. System menu information
4. Speed information (GS ground speed / TAS True air speed)
5. Range zoom of map
6. Current heading
7. Information about next waypoint
8. Map and route
9. BRG1 selected (See guidance panel #3)
10. BRG2 selected (See guidance panel #4)
11. Radio frequencies information

Map		Systems	
Map Data 1 Airports 2 VOR 3 Intersections 4 NDB Rose Mode 5 Approach 6 Vor/Loc 7 Nav/Fms 8 Map 9 Zoom In + 10 Zoom Out -	1. Show airports in map 2. Show VORs in map 3. Show waypoints in map 4. Show NDBs 5. Change rose in mode Approach 6. Change rose in mode VOR/LOC 7. Change rose in mode NAV FMS 8. Change rose in mode Map 9. Map Zoom In 10. Map Zoom out	1 Status 2 Anti-Ice 3 Flight Cntrls 4 Fuel 5 ECS 6 Hydraulics 7 Electrical	1. Show Current status (resume) 2. Anti-ice system status 3. Flight controls info 4. Fuel system info 5. Air conditioning system info 6. Hydraulics system info 7. Electrical system info



EICAS

1. Low pressure compressor info for engines 1 and 2 (N1)
2. Exhaust engine temperature engines 1 and 2
3. High pressure compressor info for engines 1 and 2 (N2)
4. Fuel flow (gallons per hour) for engines 1 and 2
5. Warning and caution alerts
6. Fuel quantity (Kgs)
7. Landing gear status
8. Oil pressure (PSI) and temperature (C°)
9. APU status
10. Vibration of engine, low and high
11. Cabin pressure information
12. Slats, flaps and spoiler info
13. Trims (roll, yaw and pitch) status

See how to use this panel in the next video:

[Tutorial 2 - Knowing the basic pre-flight systems](#)

FMC



All buttons indicated with this color, are available and fulfill a function.

All buttons indicated with this color, are unavailable (inop).

See how to use this instrument here:

[Tutorial 1 - Before Starting Engines and inserting a flight plan in FMS](#)

Complete list of tutorials in video (Youtube)

To better understand how our aircraft works, visit the tutorials we show you below in the order all were published. We are sure these will help more in the learning process of it.

Leave us a comment (in video corresponding) if you need help, all users, we and our visitors will collaborate to solve them. We only ask for decency and respect in them.

Tutorial 1 - Before Starting Engines and inserting a flight plan in FMS

<https://youtu.be/b1hxFDQ9C14>

Tutorial 2 - Knowing the basic pre-flight systems

<https://youtu.be/RU-P3px4z58>

Tutorial 3 - Cockpit lights and external lights

<https://youtu.be/VT2ruCoLPYU>

Tutorial 4 - Ground services and starting engines

<https://youtu.be/1xLvu-0eOIA>

Tutorial 5 - Taxiing and takeoff

<https://youtu.be/mCOple8fsZ0>

Tutorial 6 - Autopilot procedure

<https://youtu.be/Dmpc722fZ40>

Tutorial 7 - Approach procedure

<https://youtu.be/wbiuQjEhcAg>

Tutorial – How to fly the airplane

<https://youtu.be/6qsovAgyDhI>

CREDITS AND ACKNOWLEDGMENTS

Disclaimer: The **EMBRAER** brand and all its series are owned by **Empresa Brasileira de Aeronáutica S.A.** Virtualcol only develops a non-exact emulation of its aircraft for recreational and video game purposes and never for flight training of the genuine product.

This work would not have been possible without the blessings of God all powerful and our Lady Virgin Mary, my beautiful wife who has been patient with me all this time, as well as the valuable help and collaboration of:

- The 3D modeling of Claudio Sánchez (HangarCeroUno <https://hangarcerouno.blogspot.com/>)
- And the repaints and excellent mapping of Gustavo La Cruz.
- My son and his collaboration

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