



Checklist + Flow-Procedure
Boeing 737 NG
-600/-700/-800/-900



DO NOT USE FOR FLIGHT

Boeing 737 NG

Checklist / Flow-Procedure

including basic Flight-Planning-Charts

*for PMDG 737NGX
with Microsoft Flight Simulator X*

*created by Carsten Rau
www.CarstenRau.de*

Version 6.0

To start with a dark & cold cockpit, you need to set the aircraft to dark & cold in the FMC and activate dark and cold for every startup.

Parking Position:

- FSX start & create 737 flight
- Parkingbreak Check Set
- IVAP-Connection Activate
- Dep-Metar Check & note
- Arr-Metar Check & note
- Flightplan Create (e.g. in FSBuild)
- Door 1 Open (Shift + E / via FMC)
- Gangway Enable (if available) (Strg + J)
- Battery (OHP) On & Covered
- DC-Voltemeter-Selector (left) BAT
- DC-Voltemeter Check ≈ 28V
- AC-Voltemeter-Selector (right) STBY PWR
- Master Caution Disengage
- Hyd. Pumps All Off
- Fuel Pumps All Off
- Interior Lights:
 - Panel-Light (Pedestal) as required
 - Flood-Light (Pedestal) as required
 - Lights (Main Panel) as required
 - Background (Main Panel) as required
 - AFDS Flood (Main Panel) as required
 - Panel Light (Ovhd Panel) as required
 - Circuit Brk. (Ovhd Panel) as required
- Cabin / Utility Power Check On
- IFE Pass Seat Power Check on
- ### Connect Ground Power ###
- ### If no Ground Power available bring forward APU-start ###
- FMC (Main Menu):

- Clear any messages CLR
- FS Actions R5
- Ground Connections L3
- Wheel Chocks Check Set / L1
- Ground Power Connect / L2
- Air Start Unit Connect / L3
- Air Cond. Unit Connect / L4
- Pitot Covers Check Removed / L5
- Return L6
- Ground Power (GRD PWR) On
- AC-Voltemeter-Selector (right) GND PWR
- Emergency-Lights Armed & Covered
- External Lights
 - Position Steady
 - Wheel Well On
 - Logo On
 - Wing On
- Master Caution Disengage
- Seat-Belt Auto / On
- ### Continue here for next flight (cockpit not dark+cold) ###
- FMC (FS Action Menu):
 - Clear any messages CLR
 - Payload Menu L2
 - Set Payload (R6 for random)
 - Return L6
 - Fuel Menu L1
 - Set Fuel (as required per chart)
 - Enter Fuel in LBS Enter + L1
 - Return L6
 - Return to Main Menu L6
- Recirc. Fan Left Auto
- Recirc. Fan Right Auto

- Pack Left Auto
- Pack Right Auto
- Autopilots Check Off
- Speed Brake Check Down / Off
- Cockpit Voice Recorder Hold for 5sec
Wait for green light to appear
- Engine Fire Test Button Hold Left
Verify FAULT and APU DET INOP light illuminated
- Engine Fire Test Button Hold Right
Verify test lights illuminated and bell ringing
- IRS
 - DSPL SEL Test
 - DSPL SEL HDG/STS
 - IRS Selector Left ALIGN
 - IRS Selector Right ALIGN
- FMC
 - FMC Menu L1
 - Clear any messages CLR
 - Initiate (Pos Init Menu) INIT REF
 - Enter Airport Dep Code Enter + 2L (not required)
 - Enter Gate Enter + 3L (not required)
 - Go to Page 2 NEXT PAGE
 - Copy GPS L Position L4
 - Go to Page 1 PREV PAGE
 - Paste GPS Position R4
- IRS
 - IRS Selector Left NAV
 - IRS Selector Right NAV
- FMC
 - Route page R6
 - Enter Airport Dep Code L1
 - Enter Airport Arrival Code R1

- Enter Flight No. R2
- Go to Page 2 NEXT PAGE
- Enter first waypoint after SID R1
- Enter all airways Lx
Repeat until all airways entered
- Enter last waypoint before STAR Rx (x = line of last airway)
- Activate R6
- Execute EXEC
Enter alternative destination if desired via L6
- Perf Init Page R6
- Auto-Enter ZFW 2x L3
- Enter Cost Index Enter + L5 (e.g. 80)
- Enter Cruise Flightlevel Enter + R1
- Enter Transition Alt Enter + R5
- Enter Average Cruise Wind Enter + R2 (not required)
- Enter Reserves Enter + L4
- Execute EXEC
- N1 Limit Page R6
- Set t/o power as desired
- Takeoff Page R6
- Fuel Pump Aft No.1 On
Check Low Pressure Light extinguished
- APU START
- EFIS-Mode MAP
- EFIS-Range 20 nm (or as required)
Wait until APU Gens available
- APU Gen Switch Left On
- APU Gen Switch Right On
Wait until APU GEN OFF BUS + SOURCE OFF lights extinguished
- APU Bleed Switch Check On
- Engine Bleed Switches Check On
- AC-Voltemeter-Selector (right) APU

- FMC
 - Main Menu Page MENU
 - FS Actions Menu R5
 - Ground Connections L3
 - Disconnect Ground Pwr L2
 - Disconnect Air Start Unit L3
 - Disconnect Air Cond. Unit L4
- Master Caution Disengage
- Com1-Frequenz Set (active ATC or 122.8 UniCom)
- IVAP-flightplan Copy route from FSBuild
- Departure Time Enter in UTC time (CET-2/CEWT-1)
- IVAP-flightplan Fill out and send
- IFR-Clearance
 - Clearance Request
 - First Altitude Note
 - Departure Route (SID) Note
 - Squawk Code Note
- Squawk Set
- Altimeter Set to current atm. pressure (B)
- First Altitude Set A/P-Alt.
- FMC
 - DEP/ARR Page DEP /ARR
 - Departure Page L1
 - Set dep. runway Rx
 - Set SID Lx
 - Set Transition Lx
 - Execute EXEC
 - Route Page RTE
 - ### Check no discontinuities, delete any of them ###
 - Takeoff Page R6
 - Enter t/o flaps Enter + L1
 - Auto-Enter V-Speeds R1, R2, R3

- Auto-Enter CG 2x L3 (note trim data)
- Go to Page 2 NEXT PAGE
- Enter t/o winds Enter + L1
- Select Runway condition R1
- Set Elevator trim Set to trim data from FMC
- Gangway Disable (ctrl + j)
- Door 1 Close (Shift + E / via FMC)
- Doors Check all closed
- Gen Bus Transfer Switch Check Auto + Covered
- Fuel Pumps All on (no cross-feed)
- Hydraulic Pumps All on
- Anticollision Lights On
- Pack Left Off
- Pack Right Off
- Thrust Idle (check)
- Fuel Control Switches Cutoff (check)

Engine s/u & Pushback:

- Engine s/u & p/b clearance Request
- FMC
 - Main Menu Page MENU
 - FS Actions Menu R5
 - Ground Connections L3
 - Wheel Chocks Off L1
- Pushback Start (via IVAP or FMC menu)
- Duct Pressure Gauge 30 PSI (verify)
- Ignition Selector Engine L (or R or Both)
- Left Engine Start Switch GRD
Wait till Engine 1 at N2 > 20%
- Left Engine Fuel Control Switch On
Wait till Left Engine Start Switch returned to off

- Left Engine Start Switch CONT
- Right Engine Start Switch GRD
- **### Wait till Engine 2 at N2 > 20% ###**
- Right Engine Fuel Control Switch On
- **### Wait till Right Engine Start Switch returned to off ###**
- Right Engine Start Switch CONT
- Engine Generator Switches On

- AC-Voltemeter-Selector Gen 1 (or 2)
- APU Off
- APU Bleed Off
- Pack Left On
- Pack Right On
- Pitot Heat Switches (PROBE) On
- Window Heat As Required
- Engine Anti-Ice As Required
- Wing Anti-Ice As Required
- Yaw Damper On
- Flaps Select (as entered in FMC)
- Autobreak RTO
- Pushback End
- Taxi-Lights On
- Runway Turnoff Lights On
- TCAS Test
- **### Wait for "TCAS Test passed" sound ###**
- TCAS TA/RA

Taxi:

- Taxi-Clearance Request
- Taxiways Note
- (Ground guidance Request if needed)
- Taxi to h/p

-
- Autopilot Set
 - AP Disengage bar Up (AP available)
 - FD (Flight Director) On
 - AT (Auto-Throttle) On
 - IAS 250 knots / first speed limit
 - HDG Rwy heading
 - ALT To assigned altitude (first alt)
- Spoiler Armed

h/p:

- Hand-off GND to TWR Change frequency
- l/u & t/o clrc state ready for dep (h/p xx)
- Landing-Lights On
- Runway Turnoff Lights On
- Taxi-Lights Off
- Position Lights Strobe + Steady
- IVAP-Transponder On
- Postion & hold Taxi & stop on rwy

Ready to Takeoff:

- Parkingbreak Set
- Thrust Levers Takeoff-Setting
- Parkingbreak Release
- Yoke (till 80 knots) Press forward
- VR Rotate
- V2 Lift-off

Takeoff:

- Trim settings Adjust (when needed)
- Gear Up (at positive climb rate >500ft)

After climb over 1000 ft ASL

- Autopilot On
- VNAV On
- LNAV On
- Flaps Raise on schedule
- Start time Note (if needed)
- Hand-off TWR to DEP(APP) Change frequency

Climb:

- Autobreak Off
- Spoiler Disarm
- Landing Lights Off
- Runway Turnoff Lights Off
- Wheel Well Lights Off
- ### When cleared to next / final FL ###
- AP altitude Set
- ### Do the following things if required ###
- Hand-off DEP(APP) to CTR Change frequency
- Window Heat On (under 10°C TAT)
- Engine Anti-Ice On (under 10°C TAT)
- Wing Anti-Ice On (under 10°C TAT)
- Altimeter Readjust (above 18000ft)

Cruise:

- Radio /ATC contact Maintain
- Autopilot / FMC Check permanently
- FMC Progress Page Check fuel consumption
- ### When center fuel tank empty ###
- Center fuel pump Off

Descent & Approach:

- Descent preparations Begin 30nm before T/D
- Airport-/Metar-Information Retrieve

- Autobreaks Set
- Top of Descent (T/D)
 - Alt (AP) Set (before reaching T/D)
 - VNAV Will descent automatically at T/D
- FMC
 - DEP/ARR Menu DEP/ARR
 - Arrivals Page R2
 - STARS Select Lx
 - Transition Select Lx
 - Approach Select Rx
 - App Transition Select Rx
 - Route Page RTE
 - ### Delete any discontinuities by copying and pasting the first waypoint after the discontinuity into the line of the discontinuity(Rx → Lx) ###
 - Init Ref Page INIT REF
 - Copy flap/speed setting R1 or R2 or R3
 - Paste flap/speed setting R4
 - ### When ILS available ###
- ILS frequency Set into NAV1and NAV2
- ILS course Set into AP both CRS selectors
- HGS Settings
 - Mode PRI
 - STBY Axxx ARM
 - RWY Set Airport Elevation (in ft) (EL)
 - RWY Set Runway Length (in ft) (RL)
 - GS Set Glideslope (Standard -3.00°)
 - ### When too fast / too high / drag require ###
- Speedbrakes Flight Detent
- ### Continue here ###
- Altimeter Readjust (under 18000ft)
- Hand-off CTR to APP Change frequency

- Landing Lights On
- Runway Turnoff Lights On
- Spoilers Arm

Final approach & Landing (handflow):

- Flaps Lower as indicated on PFD
(e.g. if 1 passes on PFD set to 5 etc.)
- Gear Down (latest at flap 20)
- ILS captured / Runway in sight Announce (on UC state final app)
Check flaps to ref-degree and gear down
- Hand-off APP to TWR Change frequency
- Autopilot (AP) Disengage (Disengage bar down)
- A/T (AP) Off
- AP Disengage Warning Off
- Trim settings Adjust (when needed)
After touchdown
- Throttles Idle
- Spoilers Engage (if not auto-engaged)
- Thrust reversers Engage (if needed)
- Thrust reversers Disengage under 80kt
- Runway Vacate (on UC: "rwy vacated")

Final approach & Landing (Autoland):

- Flaps Lower as indicated on PFD
(e.g. if 1 passes on PFD set to 5 etc.)
- Gear Down (latest at flap 20)
- Decision Height (Ovhd Panel) Set 100 (ft)
- AP Alt Set 0
10 - 15nm before runway verify on glideslope, required to start autoland ###
When turning into ILS continue below
- LOC/LOC (AP) On (to follow ILS localizer)

Verify white VOR/LOC illuminated on PFD

Wait until localizer captured, verify green VOR/LOC illuminated

- APP (AP) On (to follow glideslope)
Verify white GS illuminated on PFD ###
Wait until ILS glideslope captured, verify green GS illuminated
- AP2 On
Verify both autopilots on ###
Verify LAND3, ROLLOUT and FLARE illuminated on PFD
- ILS captured Announce (on UC state final app)
- Hand-off APP to TWR Change frequency
- Landing clearance Request (UC: state "short final")
After touchdown
- Throttles Idle
- Spoilers Engage (if not auto-engaged)
- Thrust reversers Engage (if needed)
- Thrust reversers Disengage under 80kt
- Autopilot (AP) Disengage (bar down)
- A/T (AP) Off
- AP Disengage Warning Off
- Runway Vacate (UC: state „rwy vacated“)

Taxi:

- Transponder Stdby
- Hand-off TWR to GND Change frequency
- Taxiways Note and follow
- (Ground-Guidance Request if required)
- FD (AP) Off
- Spoilers Off
- Flaps Set 0
- Autobreaks Off
- Taxi Lights On
- Landing Lights Off

- Runway Turnoff Lights Off
- Position Lights Steady
- Wheel Well Lights On
- Window Heat Off
- Engine Anti-Ice Off
- Wing Anti-Ice Off
- Landing time Note (if needed)
- APU START
- Autopilot (AP) Reset (bar up)

Parking Position:

Before entering parking position

- Taxi Lights Off

At parking position

- Parkingbreak Set

Wait till APU Gen available

- APU Gen Switches On
- APU-Bleed On
- AC-Voltemeter-Selector APU
- ENG 1 Cut off
- ENG 2 Cut off
- Master Warning Disengage
- FMC
 - Main Menu MENU
 - FS Actions R5
 - Ground Connections L3
 - Set Wheel Chocks/Breaks L1
 - Ground Power L2
 - Air Start Unit L3
 - Air Condition Unit L4
 - Return L6
 - Door Menu L4

- | | |
|--|-------------------|
| ○ Open Doors | Lx / Rx |
| ● Gangway | Enable (ctrl + j) |
| ● Seat-Belts | Off / Auto |
| ● Ground Power (GRD PWR) | On |
| ● AC-Voltemeter-Selector (right) | GND PWR |
| ● APU | Off |
| ● APU Bleed | Off |
| ● External Lights | |
| ○ Position | Steady |
| ○ Wheel Well | On |
| ○ Logo | On |
| ○ Wing | On |
| ○ Anti-Collision | Off |
| ● TCAS | Stdby |
| ● Yaw Damper | Off |
| ● Pitot Heat Switches (PROBE) | Off |
| ● Engine Start Switches | Both Off |
| ● Hyd Pumps | All Off |
| ● Fuel Pumps | All Off |
| ● Master Warning | Disengage |
| ### Stop here for next flight, continue to set cockpit to dark+cold ### | |
| ● External Lights | All Off |
| ● Emergency Lights | Uncovered + Off |
| ● IRS Selectors | Both off |
| ● AC-Voltemeter-Selector (right) | STBY PWR |
| ● Ground Power (GRD PWR) | Off |
| ● IFE Pass Seat Power | Off |
| ● Cabin / Utility Power | Off |
| ● Interior Lights | All Off |
| ● DC-Voltemeter-Selector (left) | STBY PWR |
| ● Master Warning | Disengage |
| ● Battery | Uncovered + Off |



Checklist + Flow-Procedure
Boeing 737 NG
-600/-700/-800/-900



Intentionally Blank

Flight-Planning-Charts:

Flights-Planing-Charts:

As all required charts are included within the FCOMv1 PDF-File I will not include them here again. Print the following pages from the PDF-file for the listed 737 models:

737-600:	285-288, 295-299, 305 (data in KG, 10 pages)
737-700:	325-327, 333-337, 343 (data in LB, 9 pages)
737-800:	359-362, 369-373, 379 (data in KG, 10 pages)
737-900:	405-408, 417-421, 427 (data in LB, 10 pages)
737-900ERW:	447-450, 457-461, 467 (data in KG, 10 pages)

Further Notes:

➔ *Total fuel = Trip fuel + Reserves (45min Holding, 60min Diversion to alternate, Contingency including minimum landing fuel, 5% of trip-length-reserve and taxi-out fuel). Modify alternate value as required.*

➔ Load wing tanks first, with same amount of fuel; wing tanks full ➔ center tank.

Fuel planning notes (737-600):

	Basic Operating Weight (OEW)	XX.XXX KGS
+	Payload (passengers & cargo)	XX.XXX KGS
=	Zero Fuel Weigh (ZFW) (max 51.709 KGS)	XX.XXX KGS
+	Holding	1.200 KGS
+	Diversion	1.750 KGS
+	Contingency Fuel	550 KGS
=	Planned Landing Weight (PLW) (max 54.657 KGS)	XX.XXX KGS
+	Flight Plan Fuel (fuel for route)	XX.XXX KGS
=	Planned Takeoff Weight (PTOW) (max 57.606 KGS)	XX.XXX KGS

➔ **Flight Plan Fuel + 3.500 KGS = Total Fuel**

Fuel planning notes (737-700):

	Basic Operating Weight (OEW)	XX.XXX LBS
+	Payload (passengers & cargo)	XX.XXX LBS
=	Zero Fuel Weigh (ZFW) (max 120.500 LBS)	XX.XXX LBS
+	Holding	2.800 LBS
+	Diversion	4.000 LBS
+	Contingency Fuel	1.000 LBS
=	Planned Landing Weight (PLW) (max 128.000 LBS)	XX.XXX LBS
+	Flight Plan Fuel (fuel for route)	XX.XXX LBS
=	Planned Takeoff Weight (PTOW) (max 133.000 LBS)	XX.XXX LBS

→ Flight Plan Fuel + 7.800 LBS = Total Fuel**Fuel planning notes (737-800):**

	Basic Operating Weight (OEW)	XX.XXX KGS
+	Payload (passengers & cargo)	XX.XXX KGS
=	Zero Fuel Weigh (ZFW) (max 61.688 KGS)	XX.XXX KGS
+	Holding	1.400 KGS
+	Diversion	2.200 KGS
+	Contingency Fuel	600 KGS
=	Planned Landing Weight (PLW) (max 65.317 KGS)	XX.XXX KGS
+	Flight Plan Fuel (fuel for route)	XX.XXX KGS
=	Planned Takeoff Weight (PTOW) (max 70.533 KGS)	XX.XXX KGS

→ Flight Plan Fuel + 4.200 KGS = Total Fuel

Fuel planning notes (737-900):

	Basic Operating Weight (OEW)	XX.XXX LBS
+	Payload (passengers & cargo)	XX.XXX LBS
=	Zero Fuel Weigh (ZFW) (max 138.300 LBS)	XX.XXX LBS
+	Holding	3.400 LBS
+	Diversion	4.800 LBS
+	Contingency Fuel	1.300 LBS
=	Planned Landing Weight (PLW) (max 146.300 LBS)	XX.XXX LBS
+	Flight Plan Fuel (fuel for route)	XX.XXX LBS
=	Planned Takeoff Weight (PTOW) (max 174.700 LBS)	XX.XXX LBS

→ Flight Plan Fuel + 9.500 LBS = Total Fuel**Fuel planning notes (737-900ERW):**

	Basic Operating Weight (OEW)	XX.XXX KGS
+	Payload (passengers & cargo)	XX.XXX KGS
=	Zero Fuel Weigh (ZFW) (max 62.731 KGS)	XX.XXX KGS
+	Holding	1.600 KGS
+	Diversion	2.400 KGS
+	Contingency Fuel	600 KGS
=	Planned Landing Weight (PLW) (max 66.360 KGS)	XX.XXX KGS
+	Flight Plan Fuel (fuel for route)	XX.XXX KGS
=	Planned Takeoff Weight (PTOW) (max 79.015 KGS)	XX.XXX KGS

→ Flight Plan Fuel + 4.600 KGS = Total Fuel



Checklist + Flow-Procedure
Boeing 737 NG
-600/-700/-800/-900



Intentionally Blank