



# Ryanair PMDG 737 Flows

Best learnt in conjunction with Filbert's tutorial at <https://youtu.be/mX5QRithc0E>



Cold & Dark	
DC Battery	On
Emergency Exit Lights	Arm
Ground Power	On (Establish)
Gear	Down, 3 Greens ⇒ Check Main Panel Annunciators ⇒ Check AFT Overhead Annunciators
Flaps	Up ⇒ Check Flap Indicator ⇒ Check Lights Extinguished
Fire Test	Test Left ⇒ 2 Orange Lights Test Right ⇒ Handles Lit ⇒ ENG Overheat Lights Illuminated
SQUIBS (Fire Solution) Test	Test Left + Right ⇒ 3 Green Lights Illuminated
Manual Gear Extension	Check Flap Down
Circuit breakers	Check All In ⇒ White collar if pulled
Emergency Escape Rope	Stowed / In
Flight Recorder	Test ⇒ Light Extinguishes ⇒ Return to Normal
MACH Airspeed Warning Test	Press & Hold ⇒ Number 1 ⇒ Number 2 Check for beeps
Stall Warning Test	Press & Hold ⇒ Number 1 ⇒ Number 2 Check stick shaker
IRS	Both NAV
Lights	Test ⇒ Check All Annunciators
Oxygen	Test ⇒ Tested 100%

FMC Setup	
Fuel	FS Actions → Fuel ⇒ Enter Block Fuel If No Delays Expected: ⇒ Round up to nearest 100kg ⇒ Add 100kg
Payload	Enter ZFW
Set IRS Position	Pos Init ⇒ Page 2 - copy GPS L ⇒ Page 1 - paste into R4
Route (FMC)	Enter ⇒ Origin + Dest ⇒ FLT NO  DEP ARR ⇒ Select Departure Runway ⇒ Select SID ⇒ R6 - Activate ⇒ Next Page Enter Route  DEP ARR ⇒ Select Approach ⇒ Select STAR  RTE ⇒ Check for Discontinuity  EXEC
INIT REF (FMC)	Enter ⇒ Cost Index ⇒ Reserves (Final + Alternate) ⇒ ZFW (Double Click) ⇒ Plan/Fuel (plan field used if re-fuelling not yet complete) ⇒ CRZ ALT ⇒ CRZ Wind (from Top of Climb) ⇒ Trans ALT (add 1, e.g. 6001 to maintain 6000ft on QNH)  EXEC
NI LIMIT (R6)	Enter SEL (assumed temperature from takeoff performance calculator)
Takeoff (R6)	Enter ⇒ Flaps ⇒ CG% (click L3 twice to autofill) ⇒ V Speeds Set V2 Speed in MCP Set Takeoff Trim

Final Flow - Overhead	
Yaw Damper	On
Navigation	Normal & auto
Fuel Pumps	On (As Required)
Crossfeed Valve	Test ⇒ Bright Blue ⇒ Dim Blue
AC & DC Monitors	As Required
Galley	On
Electrical Panel	As Required
Panel/Circuit Breaker Lights	As Required
Equip. Cooling	Normal x2
Emergency Exit Lights	Arm
Seatbelts	On
Wipers	Park
Window Heats	On
Probe Heats	Off On during Icing Conditions
Anti-Ice	Off
Hyd. Pumps	All On
Trim Air	On (not present on -700)
Recir. Fans	Auto
Packs	Both Auto
Isolation Valve	Open or Auto
Eng Bleed	Both On
APU Bleed	On (once the APU has been running for at least 1 minute)
FLT ALT	Enter
LAND ALT	Enter
Pressurisation Mode	Auto
Lights	As Required ⇒ Logo - on at night ⇒ Wheel Well - as required ⇒ Position - Steady
APU	Start ⇒ Check Low Press Annunciator ⇒ EGT Check Rise 6/8

MCP Setup & Pre-Departure Flow	
Heading	Enter Runway Heading
Course	Enter Inbound and Outbound Course to VOR/LOC as required Enter NAV Aid Frequency
Altitude	Enter Cleared Level / Stop Altitude
Flight Directors	On (Left First)
EFIS	As Desired
Autobrake	RTO
MFD	Select SYS ⇒ Check Hydraulic Pressures Select ENG
Parking Brake	Set
Speed Brake	Down
Config Check	Advance Throttles ⇒ Check warning horn
Start Levers	Cut-off
Stab Trim Switches	Normal
Radios	Set/check
Transponder	2000 / Clearance Squawk STDBY
ALT Source	Set to Pilot Flying ⇒ 1 = Captain ⇒ 2 = F/O
Rudder & Aileron Trim	Free & 0
Safety Inspection Checklist	Perform

SAFETY INSPECTION CHECKLIST	
SURFACES & CHOCKS	CHECKED
MAINTENANCE STATUS	CHECKED
BATTERY	ON
ELECTRIC HYDRAULIC PUMPS	ON
LANDING GEAR LEVER	DOWN
SHIPS LIBRARY	CHECKED

Before Start	
APU Gen	Both On
Parking Brake	Check Set
Ground Power	Remove
Doors	Close ⇒ Check Door Lights Extinguished (Overhead)
Stairs / Jetways	Remove
APU Bleed	On
Before Start Checklist	Perform

PHONES	OFF
EFB	AIRPLANE MODE, STOWED
FLIGHT DECK WINDOWS & COCKPIT DOOR	LOCKED
DOORS	CLOSED
PASSENGERS	SEATED
AIR COND PACKS	OFF
ANTICOLLISION LIGHT	ON
PARKING BRAKE	SET
TRANSPONDER	ALT OFF

BEFORE START CHECKLIST	
IRS MODE SELECTORS	NAV
GEAR PINS	1, 2, 3 REMOVED
LIGHT TEST	CHECKED
OXYGEN	TESTED, 100%
YAW DAMPER	ON
NAV TRANSFER & DISPLAY SWITCHES	NORMAL, AUTO
FUEL	___REQ'D, ___ONBOARD, ___PUMPS ON
CAB/UTIL, IFE/GALLEY POWER (AS INSTALLED)	ON
EMERGENCY EXIT LIGHTS	ARMED
FASTEN BELTS	ON
WINDOW HEAT	ON
AIR COND & PRESS	PACKS___, BLEEDS ON, SET
PRESSURIZATION MODE SELECTOR	AUTO
INSTRUMENTS	X-CHECKED
AUTOBRAKE	RTO
HYDRAULICS	NORMAL
SPEEDBRAKE	DOWN DETENT
PARKING BRAKE	SET
STAB TRIM CUTOUT SWITCHES	NORMAL
WHEEL WELL FIRE WARNING	CHECKED
RADIOS, RADAR & TXPDR	SET & STBY
RUDDER & AILERON TRIMS	FREE & ZERO
TAKEOFF BRIEFING	DISCUSSED
PA	COMPLETE
FMC/CDU	SET
NI & IAS BUGS	AUTO/SET
STAB TRIM	___SET
PERFORMANCE/W&B	SIGNED & SENT

Pushback & Start-up	
Pushback	Request
Parking Brake	Release
Start Clearance	Receive
Eng 2 Start	Starter - GND ⇒ Check N2 Rise ⇒ Check Oil Pressure Rise ⇒ Check NI Rise N2 = 25% ⇒ Eng 2 Start Lever On Start Valve Indication ⇒ Extinguished Start Switch ⇒ Off (Automatic)
Eng 1 Start	Starter - GND ⇒ Check N2 Rise ⇒ Check Oil Pressure Rise ⇒ Check NI Rise N2 = 25% ⇒ Eng 2 Start Lever On Start Valve Indication ⇒ Extinguished Start Switch Off (Automatic)
Eng 1 + 2 Buses	Both On
APU	Off
Ground Equipment	Clear ⇒ Tug ⇒ Towbar ⇒ Bypass Pin

After Start	
Start Switches	Both Cont
Probe Heat	On
Eng Anti-Ice	As Required
Packs	Both Auto
APU Bleed	Off
Isolation Valve	Auto
Flaps	Set
Stab Trim	Check
Start Levers	Idle Detent
Flight Controls	Check
Recall	Check
MFS ENG	Press (to blank lower DU)
Before Taxi Checklist	Perform

BEFORE TAXI CHECKLIST	
GENERATORS	ON
APU	___
START SWITCHES	CONT
PROBE HEAT	ON
ANTI-ICE	___
AIR COND	PACKS AUTO, BLEEDS ON
ISOLATION VALVE	AUTO
FLAPS	___ REQ'D, ___ SEL'D, GREENLIGHT
STAB TRIM	___ UNITS REQ'D, ___ SET
START LEVERS	IDLE DETENT
FLIGHT CONTROLS	CHECKED
RECALL	CHECKED

Before Taxi	
Taxi Lights	On
Config Check	Advance Thrustles ⇒ Check no horn

Taxi Speeds	
Runway Back-track	Max 50kts
Taxiway	Max 30kts
Apron	Max 15kts
Turn > 45 degrees	Max 10kts

Taxiing	
Before Takeoff Checklist	Complete to the line
Cabin Check	Press Attend

BEFORE TAKEOFF CHECKLIST	
CONFIG	CHECKED
FLAPS	___ GREEN LIGHT
STAB TRIM	___ UNITS SET
TAKEOFF BRIEFING	REVIEWED
CABIN	SECURE
MCP	SET
TRANSPONDER	TA/RA
STROBE LIGHTS	ON
LANDING LIGHTS	ON

Line Up	
Lights	Landing Lights ⇒ All on Position Lights ⇒ Strobe & Steady Runway Turnoff Lights ⇒ On Taxi Light ⇒ Off until cleared for takeoff, then on
Auto-throttle	Arm
Navigation	LNAV or HDG Select
Transponder	TA/RA
Before Takeoff Checklist	Complete below the line

Takeoff	
Thrust Levers	Advance to 40% NI ⇒ Check Stable Press TOGA button
Pitch	Rotate at VR ⇒ Pitch to 20 degrees
Positive Rate	
Gear	Up
400 feet	
LNAV	Check engaged
Autopilot	Engage
Bug Up	Select Flaps Up Speed
Flaps	Positive Trend toward Flaps 1 ⇒ Flaps 1 Past F1 indication, with positive trend towards Flaps Up ⇒ Flaps Up
Climb	Next Altitude Select ⇒ ALT INTV ⇒ Engage VNAV / LVL CHG / VS

Approaching Cleared Level	
VS Mode	2000ft to cleared level ⇒ VS = 2000ft/pm 1000ft to cleared level ⇒ VS = 1000ft/pm

After Takeoff Flow	
Pressurisation	Check
Start Switches	Off
Gear	Up + Off
Autobrake	Off
Altimeters	Check
After Takeoff Checklist	Perform

AFTER TAKEOFF CHECKLIST	
AIR COND & PRESS	___, ___ set
ENGINE START SWITCHES	___
LANDING GEAR	UP/OFF
AUTOBREAK	OFF
FLAPS	UP, NO LIGHTS
ALTIMETERS	SET

Transition Altitude	
Altimeters	Set Standard

10,000 feet FLAPS Flow	
F - Fuel	Check Balanced
L - Lights	Landing lights off Runway turnoff lights off Taxi light off
A - APU	Off
P - Pressurisation	Check
S - Seatbelts	Auto
Recall	Check

Flight Level 300	
Bank Angle Limiter	Set to 10 degrees

Landing Weight Calculation	
<b>PROG (FMC)</b> ⇒ Check destination fuel (DF) ⇒ Subtract destination fuel from current fuel on board (FOB) to get remaining fuel burn (RFB)	
<b>APPROACH REF (FMC)</b> ⇒ Check current gross weight (GW) ⇒ Subtract RFB from GW ⇒ Enter result into GROSS WT (L1) field	
Video link: <a href="https://youtu.be/mX5QRithc0E?t=7151">https://youtu.be/mX5QRithc0E?t=7151</a>	

Descent Preparation—80-100nm from TOD	
Weather	Checked
Arrival Brief	Consider Threats ⇒ Congestion ⇒ Terrain ⇒ Weather ⇒ Runway ⇒ Arrival
DES (FMC)	SPD REST - 250/10000 EXEC.
Forecast (L6)	Set TRANS LVL Set ISA DEV/QNH Set TAI ON/OFF (if required) Set WIND ALTITUDES ⇒ FL310 / 200 / 100 Set DES Winds EXEC
FIX (FMC)	Enter RW(Identifier) ⇒ E.G. RW09R / RW09L Enter distances for range rings ⇒ /5 - 5nm Ring - latest point for Gear Down + Flap 15 ⇒ /10 - 10nm Ring - latest point for Flaps 5 ⇒ Current altitude/1000*3 - rough TOD point (e.g. 30,000ft, 30*3=90, enter /90 for a 90 nm range ring)
RTE (FMC)	Check
LEGS (FMC)	Check ⇒ Arrival STAR ⇒ Restrictions
NAV	Set ILS Freq. Set VOR to STNDBY for Go-Around
Course	Set RWY Course
LAND ALT	Set/Check Airport Elevation
Minimums	Set ⇒ Radio - CAT II/III Approaches ⇒ Baro - All Other Approaches

Descent - FL200/300	
Bank Angle	25 Degrees

Perf / Fuel Checks	
APP REF (FMC)	Press Init Enter Landing Gross Weight Select Flaps/VREF - Double Click
Autobrake	As Required
Descent Checklist	Perform

10,000ft	
Seatbelts (15 Mins to land)	On
Fixed Landing Lights	On
Runway Turnoff Lights	On
Bank Angle	25 Degrees
Pressurisation	As Required
Recall	Check

10,000ft	
Seatbelts (15 Mins to land)	On
Fixed Landing Lights	On
Runway Turnoff Lights	On
Bank Angle	25 Degrees
Pressurisation	As Required
Recall	Check

FLAPS Check	
F - Fuel	Check Balanced
L - Lights	Check
A - Angle of Bank	Check
P - Pressurisation	Check
S - Seatbelts	On
Recall	Check

Transition Level	
Altimeters	Set local pressure
FRISC Check	
F - Frequencies	Tune/check
R - Range Rings	Check
I - Idents	ILS/DME Alive
S - Standby Instruments	Check
C - Courses	Check

APPROACH CHECKLIST	
ALTIMETER & INSTRUMENTS	SET & X-CHECKED
APPROACH AIDS	CHECKED & SET

Approach	
Terrain (Pilot Monitoring)	On
VSD (Pilot Monitoring)	On ⇒ Press CTR twice
LOC Intercept Heading	Arm APP mode
By 10 DME from Touchdown	
Flaps	5
HDG	Set Runway Heading
By 4 DME from Touchdown	
Gear	Down
Flaps	15

Pre-landing Flows	
Speed	VREF + 5 to 15 <i>See green box below for details</i>
Start Switches	CONT
Recall	Check
Speedbrake	Arm + Green Light
Landing Gear	Down + 3 Greens
Autobrake	As Required
Landing Lights	All On

Approach Speed Calculation	
VAPP should be VREF + 1/2 headwind component BUT	
⇒	Minimum Correction = +5 knots
⇒	Maximum Correction = +15 knots
<i>Examples</i>	
Headwind component = 14 knots,	
⇒	VAPP = VREF + 7
Headwind component = 35 knots	
⇒	VAPP = VREF + 15 (as 15 is the maximum you can add)
Headwind component = 4 knots	
⇒	VAPP = VREF + 5 (as 5 is the minimum you can add)

LANDING CHECKLIST	
START SWITCHES	CONT
RECALL	CHECKED
SPEEDBRAKE	ARMED, GREEN LIGHT
LANDING GEAR	DOWN, 3 GREENS
AUTOBRAKE	___ SET
FLAPS	___/___, GREEN LIGHT
LANDING LIGHTS	ON

Taxi-In / Clean Up	
Speed Brakes	Stowed
Strobes	Steady
Transponder	Alt Off
Flaps	Up
Trim	4 to 5
Autobrake	Off
MFD	ENG
FDs	Off
MCP Speed	100
MCP Alt	3100 / Above MSA
Start Switches	Off
Probe Heat	Auto
Lights	As Required

Arriving onto Apron	
APU	On

Stand	
Taxi Lights	OFF before pulling onto stand
APU Gens	Both On
Parking Brake	Set
2 Blues (2 Blue Eng Buses), 1 Red (Parking Brake Light On), Engines Dead (Cut Engines)	
Start Levers	Cut-off
Seat belt signs	Off
Once N2 < 20%	
Anti-Collision Light	Off

SHUTDOWN FLOW & CHECKLIST	
FUEL PUMPS	OFF
ELECTRICAL	ON ____
FASTEN BELTS	OFF
WINDOW HEAT	OFF
PROBE HEAT	AUTO/OFF
ANTI-ICE	OFF
ELECTRICAL HYDRAULIC PUMPS	OFF
VOICE RECORDER	ON/AUTO
AIR COND PACK(S)	AUTO
ENG BLEED	ON
APU BLEED	OFF
EXTERIOR LIGHTS	____
START SWITCHES	OFF
AUTOBRAKE	OFF
SPEEDBRAKE	DOWN DETENT
FLAPS	UP, NO LIGHTS
PARKING BRAKE	SET
START LEVERS	CUTOFF
WEATHER RADAR	OFF
TRANSPONDER	2000, STANDBY
CVR CB	IN/OUT
COCKPIT DOOR	UNLOCKED

SECURE FLOW & CHECKLIST	
IRS MODE SELECTORS	OFF
CAB/UTIL, IFE/GALLEY POWER (as installed)	ON
EMERGENCY EXIT LIGHTS	OFF
AIR COND PACKS	OFF
TRIM AIR (N/A - B737-700)	AUTO/OFF
APU/GROUND POWER	OFF
BATTERY	OFF