Quality Wings Avro RJ70/85/100 BAe146
Cold & Dark Startup

Version 1.00

This is a re-working of the document “QualityWings - Ultimate 146 Collection Quick Start Manual.pdf” – and is not based on any “real” operations manual.

Note: To set “Cold and Dark” as a default startup *for every variant*, add the line **PanelState=01_Cold_And_Dark.PNL** to the file qw146.cfg (in fsx_root/QualityWings). If you want to do a manual cold & dark startup on individual aircraft, use the MCDU/PNL method as described in the Quick Start Manual.

Ensure your QW version is fully patched, as the labelling on the TRP panel was incorrect on the original release.

An up-to-date version of this guide is kept on NZFSIM: qw146_startup.pdf
Please notify me of any errors or additions via the contact page on NZFSIM.

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2nd February 2013.

Quality Wings Avro RJ70/85/100 BAe146 – Cold & Dark Startup

Info needed prior to selecting the aircraft:

- Local ambient air temperature (ATIS or OPUS) - for MCDU and TRP
- Local wind direction/strength (ATIS or OPUS) - for MCDU
- Cruise altitude wind direction/strength (OPUS) - for MCDU
- Altitude threshold for freezing point (OPUS) – for setting anti-ice
- Waypoint VOR/ADF frequencies – for MCP/NAV

1) Set load/fuel etc. in QW146 Despatcher
2) Load flight plan (in FSX, or later via MCDU)

SETUP

Parking Brakes ..... **ON**

UPPER PANEL

1) Battery ..... **ON** (then mute the warnings)
2) Standby Inverter ..... **ARM** (verify)
2) Standby Generator ..... **ARM** (verify)
3) Nav lights ..... **ON**
4) Flight deck emergency lights ..... **ARM**
5) Left inner Fuel Pump ..... **ON**
6) APU ..... **START**
7) When APU has spooled up (green indicator), APU/GEN - **OFF/RESET** then **ON**
8) Avionics, Antiskid & Liftspoiler ..... all **ON**
9) Fasten Seat belts ..... **ON**

[Request IFR clearance from ATC. Note initial altitude assignment (to be set on MCP)]

IRS Panel

Set both selectors to **NAV**.

MCDU

Program the MCDU (INIT, PERF, RTE etc.), using departure runway determined by wind direction (ATIS/OPUS).

THRUST RATING PANEL

1) Set TOGA (**MAX** or **REDU**)
2) Set ambient **TEMP**
3) Set **V1** ..... (=VR – 5kts)
4) Set **V+** ..... (VR from table)
5) Set **VDOT** ..... (VFTO from table)
6) Set **V2** on MCP panel ..... (V2 from table)

[Initiate PUSHBACK]

UPPER PANEL

1) Beacon Light ..... **ON**
2) APU/AIR ..... **OFF** (verify)
3) PACK1 and PACK2 ..... **OFF** (verify)
4) ENG AIR 1-4 ..... **OFF** (verify)
5) ENG ANTI-ICE ..... all **ON**
6) Fuel Pumps ..... all **ON**
7) Start Master ..... **ON**
8) Select engine (4,3,2,1)

9) ENGINE ..... **ON**
10) At 10% N2 flip fuel cut-off (on throttle pedestal) - **ON**
11) Repeat for remaining engines.
12) Engine Selector ..... **OFF**
13) Start Master ..... **OFF**
14) GEN1 ..... **ON**
15) GEN4 ..... **ON**
16) APU Start ..... **OFF**
17) APU ..... **OFF/RESET**
18) ICE protection (pitot etc.) ..... all four **ON**
19) BRAKE Fans ..... **AUTO**
20) AC Pump ..... **AUTO**
21) PTU ..... **AUTO**
22) ENG2, ENG3 Pumps ..... **ON**
23) ENG4 Air ..... **ON**
24) APU Air ..... **ON**
25) ENG ICE ..... **OFF**

TAXI

1) Request taxi clearance from ATC.
2) Note departure runway and amend MCDU if necessary
3) Check/set barometer (keyboard **B** then **D**)
4) Check trim (**3.0**-**3.5** for 18deg flaps t/o)
5) Set **18deg** flaps for normal t/o - **30deg** for short t/o
6) Set Transponder to **TA/RA** (radios panel – SHF 5)
7) Air Brakes ..... **CLOSED** (verify)
9) Taxi Lights ..... **ON**
8) Parking Brake ..... **OFF**
10) Start taxi

MCP Panel

1) Set **CRS** and **HDG** to runway heading
2) Set initial clearance altitude
3) Set initial VOR frequency of first waypoint in flight plan on **VHF NAV1**
4) Auto-thrust ..... **ON**
5) Flight Director ..... **ON**

TAKE-OFF

1) Landing Lights ..... **ON**
2) Set throttle to around 50-60% N1
3) Allow spool-up then press **TOGA** on MCP
4) At **V_R**, rotate to around 12deg until **V_2** (or V_2+20kts)
5) Up to 1000ft (1500ft or 3000ft depending on country) set TRP CLIMB - **NORM**
6) At **V_{FTO}** retract flaps (may need to trim up substantially)
7) ENG AIR ..... all four **ON**
8) APU AIR ..... **OFF**
9) Check all PACKs ..... **ON** (verify)

CLIMB

1) Accelerate to **250kt**
2) Check that on intercept course to WP1 then engage **VNAV**, **LNAV** on MCP
3) Select **NAV1** to engage a/p