



JOEL PLAICE & ASSOCIATES INC.

INTERNATIONAL SIMULATOR CONSULTING AND TECHNICAL SUPPORT SERVICES

KLM 737-300 (EFIS) Full Flight Simulator Technical Description

| Simulator General Description | |
|-------------------------------|---|
| Operator/Sponsor | KLM |
| Location | Schipol Airport, Amsterdam, Netherlands |
| Manufacturer | CAE, Montreal, Canada |
| Original In-Service Date | 1987 |
| Current Status | Currently Certified and Operating in Training |

| Simulated Aircraft | |
|----------------------------------|-----------------------|
| Aircraft Manufacturer | Boeing 737-300 (EFIS) |
| Engine Manufacturer / Model | GE CFM-3B1 |
| Tail # Still in Operator's Fleet | No |

| Qualification / Certification | | | |
|-------------------------------|-----------------------|------------|-----------------|
| Authority: | Country: | Standard: | Classification: |
| RLD | Netherlands | JAR-STD 1A | Level CG |
| Certification Event: | Certifying Authority: | | Date: |

| | | |
|---------------------------|-------------------|--------------|
| | | |
| Initial Qualification | RLD / Netherlands | July 1987 |
| Last Recurrent Evaluation | RLD / Netherlands | January 2007 |
| Next Recurrent Evaluation | RLD / Netherlands | January 2008 |

| Aircraft Avionics | |
|----------------------------------|---------------------------|
| Unit / System: | Manufacturer / Model: |
| Flight Management | Honeywell 171497 |
| MCDU | 167550-01-01X |
| GPWS / EGPWS | GPWS |
| EICAS / ECAM | Analog Engine Instruments |
| EFIS / Analog Flight Instruments | EFIS |

| Flight Compartment | |
|--------------------------------|---------------------------|
| Primary Flight Instrument Type | Electronic |
| Engine Instrument Type | Analog |
| Unit / System: | Manufacturer / Model: |
| ADI EADI PFD | EADI Collins 622-7998-001 |
| HSI EHSI NFD | EHSI Collins 622-7999-001 |

| | |
|--------------------------|-----------------------|
| CDU MCDU | MCDU 167550-01-01X |
| INS GPS EGPWS | GPWS |
| Autopilot | Honeywell 4051601-912 |
| TCAS | No |
| Auto Throttles Installed | Yes |
| Heads Up Display | None |
| Weather Radar | None |

| Motion System | |
|----------------------|--|
| Manufacturer / Model | CAE 750 Series |
| Type (Hyd/Elec) | Hydraulic |
| Motion System Drive | Digital |
| Number of Axis | 6 Axis |
| Jack Stroke Length | 75 inch Stroke |
| HPU Pump(s) | <ul style="list-style-type: none"> • 3 Motion Pumps • 1 Control Loading Pump • 1 Cooling Pump |

| Control Loading System | |
|------------------------|-------------------------------------|
| Primary Controls: | |
| Manufacturer / Model | CAE / Digital DMC based DN1 Cabinet |

| | |
|----------------------------|-------------------|
| Type (Hyd/Elec) | Hydraulic |
| Control System Drive | DN1 based Digital |
| No. of Primary Channels | 7 |
| Loaded Primary Controls: | Installed: |
| Capt Aileron (Wheel) | Yes |
| Capt Elevator (Column) | Yes |
| Capt Rudder (Pedals) | Yes |
| FO Aileron (Wheel) | Yes |
| FO Elevator (Column) | Yes |
| FO Rudder (Pedals) | Yes |
| Nosewheel (Tiller) | Yes |
| Secondary Controls | |
| Loaded Secondary Controls: | Installed: |
| Stab Trim | Yes (Hyd) |
| Speed Brake | Yes (Hyd) |
| Toe Brake | Yes (Hyd) |
| Auto Throttles | Yes (Hyd) |

| Visual System - Image Generator | |
|--|--|
| IG Manufacturer / Model | Link-Miles Image II |
| Number of Channels | 4 Channels |
| Y2K Compliant | Yes |
| Visual System - Display System | |
| Display Type | Optical Window Mirror Box/CRT |
| Number of Windows | 6 Window (Capt side switchable with FO side) |
| Field of View | 180 degree x 40 degree FOV |
| Monitor Manufacturer / Model | CRT |
| Monitor Display Type / Size | Calligraphic |
| Window Display Configuration | Two Window Boxes Per Side, Plus Another Selectable |

| Host Computer / Linkage | |
|--------------------------------|--|
| Manufacturer / Model | Encore MultiSel (2 systems which are selectable) |
| Operating System / Version | MPX 3.2 |
| Y2K Compliant | Yes |
| Linkage (I/O) Interface | CAE DACBUS and C+ I/O |

| Instructor Station | |
|---------------------------|--|
| Manufacturer / Model | CAE Vistagraphic |
| IOS Display | Dual Screen / Color |
| Computer | Concurrent |
| Y2K Compliant | Yes |
| Remote Control Unit | Yes, 1 PCU, 2 EL Touchpanels |
| Independent Crew Training | No |
| Features | <ul style="list-style-type: none"> • 500 Malfunctions |

| Aural Cue System | |
|----------------------|------------------|
| Manufacturer / Model | CAE Manufactured |
| Type / Description | Digital |

| Simulated Special Effects | |
|---|------------|
| Feature: | Installed: |
| FAA / JAA Approved Windshear Profile(s) | Yes |
| Microburst Model(s) | Yes |

| | |
|-------------------------|-----|
| Simulated Oxygen System | Yes |
| Smoke Generation System | Yes |

| Data Package (Installed and Certified in the Simulator) | |
|---|----------------|
| Category: | Documentation: |
| Aerodynamic Model | D6-37908 Rev E |
| Flight Controls Model | D6-37908 Rev # |
| Engine Model | D6-47461 Rev M |

| Documentation | | | | |
|--|-----|--|-----|-------------|
| Source: | | Amounts Present (Selection is Bold and Underlined) | | |
| Equipment Manufacturer (Boeing & CAE) | | | | |
| 0% | 25% | 50% | 75% | <u>100%</u> |
| Vendor (Computer, Visual, Peripherals, etc.) | | | | |
| 0% | 25% | 50% | 75% | <u>100%</u> |
| Operator (Airline, etc) | | | | |
| <u>0%</u> | 25% | 50% | 75% | 100% |

| Spare Parts | |
|-------------|--|
| Source: | Amounts Present (Selection is Bold and Underlined) |

| | | | | |
|------------------------|-----|-----|-----|--------------------|
| Aircraft Parts | | | | |
| <u>0%</u> | 25% | 50% | 75% | 100% |
| Simulator Manufacturer | | | | |
| 0% | 25% | 50% | 75% | <u>100%</u> |
| Visual Manufacturer | | | | |
| 0% | 25% | 50% | 75% | <u>100%</u> |
| Vendor | | | | |
| 0% | 25% | 50% | 75% | <u>100%</u> |