



# JOEL PLAICE & ASSOCIATES INC.

INTERNATIONAL SIMULATOR CONSULTING AND TECHNICAL SUPPORT SERVICES

## KLM A310-200 Full Flight Simulator Technical Description

Simulator General Description	
Operator/Sponsor	KLM Flight Academy
Location	Burg. J.G. Legroweg 43 Eelde (EHGG)
Manufacturer	CAE, Montreal, Canada
Original In-Service Date	1984
Current Status	Currently Certified and Operating in Training

Simulated Aircraft	
Aircraft Manufacturer	Airbus A310-200
Engine Manufacturer / Model	GE CF80-A2
Tail # Still in Operator's Fleet	N/A

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

Initial Qualification	IVW	23 June 2000
Last Recurrent Evaluation	IVW	18 Oct 2007
Next Recurrent Evaluation		Before Nov 1 <sup>st</sup> , 2008

Aircraft Avionics	
Unit / System:	Manufacturer / Model:
Flight Management	Hardware PN Sperry 4043914-939 Op Program PN Op Code PS4050374-127
MCDU	
GPWS / EGPWS	Sundstrand p/n 965-0676-020
EICAS / ECAM	Thomson CSF p/n 9612670319
EFIS Symbol Generator	Thomson CSF p/n 9612660314
Flight Control Computer	SFENA B350 AAM4
Flight Augmentation Computer	SFENA B352 AAM1
Thrust Control Computer	SFENA B217 AAM6
Flight Warning Computer	Aeospatiale 35810 1009012

Flight Compartment	
Primary Flight Instrument Type	Electronic

Engine Instrument Type	Electronic
Unit / System:	Manufacturer / Model:
ADI   EADI   PFD	Thomson CSF 20662 155
HSI   EHSI   NFD	Thomson CSF 20662
CDU   MCDU	Yes
INS   GPS   EGPWS	Yes
Autopilot	Yes
TCAS	No
IVSI	Jaeger 65285-230-1
RDDMI	Jaeger 65540-170-2
Weather Radar	No
ACARS	No
ATIS	Yes
Auto Throttles Installed	Yes
Heads Up Display	None
Simulator Upgrades	<ul style="list-style-type: none"> <li>None</li> </ul>

Motion System	
Manufacturer / Model	CAE 500 series

Type (Hyd/Elec)	Hydraulic
Motion System Drive	Analog N1
Number of Axis	6 Axis
Jack Stroke Length	50inch Stroke
HPU Pump(s)	<ul style="list-style-type: none"> <li>• 3 Motion Pumps</li> <li>• 1 Control Loading Pump</li> <li>• 1 Cooling Pump</li> </ul>

Control Loading System	
Primary Controls:	
Manufacturer / Model	CAE / Analog
Type (Hyd/Elec)	Hydraulic
Control System Drive	Analog BIC based N1
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
Toe Brake (L&R)	Yes
<b>Secondary Controls</b>	
Loaded Secondary Controls:	Installed:
Stab Trim	Yes
Speed Brake	Yes
Auto Throttles	Yes

<b>Visual System - Image Generator</b>	
IG Manufacturer / Model	Image 2
Number of Channels	4 Channels (Side channel switchable)
Y2K Compliant	Yes
<b>Visual System - Display System</b>	
Display Type	Window/beamsplitter
Field of View	180 Degrees x 40 Degrees FOV
CRT Units	6
Window Display Configuration	Window/beamsplitter mirror
AutoCal	No
Visual Scenes	EHRD, EDDF, EBBR

Host Computer / Linkage	
Manufacturer / Model	Gould 32/97
Operating System / Version	MPX 3.4
Y2K Compliant	Yes
Upgrades	None
Linkage (I/O) Interface	CAE C Linkage (BIC Based)
Options	CAE Integrated Diagnostic System (IDS)

Instructor Station	
Manufacturer / Model	Graphics 8
IOS Display	Dual Screen w Pushbutton Control
Computer	
Y2K Compliant	Yes
Remote Control Unit	Yes
Independent Crew Training	Not Applicable
Features	<ul style="list-style-type: none"> <li>• 500 Malfunctions</li> </ul>

Aural Cue System	
Manufacturer / Model	CAE (No system Model No.)

Type / Description	Analog
--------------------	--------

Simulated Special Effects		
Feature:	Installed:	
FAA / JAA Approved Windshear Profile(s)	??	
Microburst Model(s)	No	
Simulated Oxygen System	Yes (Oxygen to be supplied by operator)	
Smoke Generation System	Yes	
CAT I, II, III	Yes	
ETOPS	No	
Data Package (Installed and Certified in the Simulator)		
Category:	Documentation:	Revision:
Aerodynamic Model		
Flight Controls Model		
Mass Properties Model		
Engine Model		
Engine Model		

Documentation
---------------

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

Spare Parts				
Source:		Amounts Present (Selection is Bold and Underlined)		
Aircraft Parts				
<u>0%</u>	25%	50%	75%	100%
Simulator Manufacturer				
0%	<u>25%</u>	50%	75%	100%
Visual Manufacturer				
0%	25%	50%	<u>75%</u>	100%
Vendor				
<u>0%</u>	25%	50%	75%	100%