

Freeware Release

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LOCKHEED Electra L-10A **Northwest Airlines (1934 livery)**



Model for Microsoft Flightsimulator 2004
"A Century of Flight"

Made with **FS Design Studio 2.24**
by **ARIK HOHMEYER**



FS DESIGN BERLIN
February 2004

70th ANNIVERSARY OF THE LOCKHEED ELECTRA L-10A

The Prototype of the 10 Electra reg. X233Y was tested by Marshall Headle at Mines Field, Los Angeles on February 23, 1934. It first went into service with **Northwest Airlines** in June 1934, and within twelve months they operated a fleet of thirteen aircraft.



Electra FSDS2 Model



The complete new FSDS2 model by **Arik Hohmeyer**

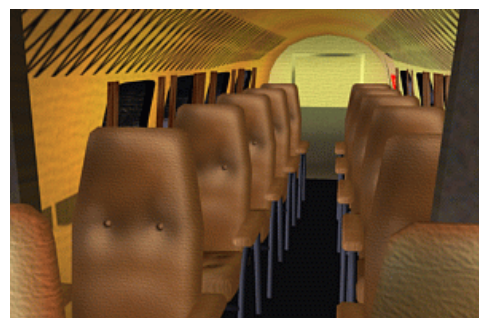
The new model features full animated moving-parts, high detailed and reflective textures and a high detailed Virtual Cockpit.



Real L-10A cockpit

Virtual cockpit of our L-10A model. For better and simpler use we have decided to design a modernized cockpit.

A suitable 2D panel is part of this package:





- 3D and 2D model design, 2D panel design and textures by **Arik Hohmeyer**
- WEIGHT TOOL Programming & design by **Arik Hohmeyer** (programmed with Borland Delphi 6.0)
- Technical and organizational support by **Chris Grabow**
- FDE (flight dynamic) based on Dave Eckert & Nick Botamer, updated and revised for FS2004 by **Wolfram Beckert**

Special thanks to:

- **Dale DeLuca** for data support, 1. pilot image and beta testing,
- **Wolfram Beckert** for the new flight dynamic and beta testing,
- **Steve Good** for 2. pilot image,
- **Dave Eckert & Nick Botamer** whose flightdynamic was a fantastic base for our flightmodel,
- **Ulf Nordin** from FS Lulea-Kallax who provided us with a lot of webspace.

This model is dedicated to the Uncle of Dale DeLuca, who had made it possible for the young Dale to fly the Electra.

Have fun!

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YOU MAY REPAINT OR MODIFY THIS MODEL AND UPLOAD IT TO ANY FREE INTERNET SITE AS LONG AS ARIK HOHMEYER AND FS-DESIGN BERLIN ARE CREDITED FOR THE ORIGINAL AIRCRAFT MODEL.

IF YOU WANT TO USE ANY PARTS OF THIS MODEL/FOLDER FOR ANOTHER PROJECT/MODEL - for example paintings/ textures - IT SHOULD BE NATURAL THAT YOU GIVE US CREDIT, TOO (also if you continue to work on these parts).

Note:

Naturally, nobody can guarantee that these data will function properly and that no problems will occur along with installation and usage. We ourselves have no problems at all running this aircraft on our systems.

We hope you like this aircraft. If you don't, then simply delete it. It was free!

Happy landings.

Installation in FS2004:

1. Unpack/extract the contents of the main zip-file into FS2004's Aircraft folder.
2. Unzip the contents of VC_Gauges.zip to the \Gauges directory of FS2004.

WEIGHT TOOL



With Weight Tool you can edit/change the aircraft weights (passangers & baggage) of your Electra.

How to use:

Weight Tool is started by double-clicks of the Weight Tool.exe which is in the main folder of the Electra. If you want to use Weight Tool you had to start it before starting Flightsimulator. The passangers and pilots have to be loaded and unloaded on the airplane graphic with the Mouse.

Aircraft / Flugzeug:

Dimensions / Abmessungen:

Wingspan / Spannweite: 54,99 ft / 16,76 m
Length / Länge / Length: 38,58 / 11,76 m
Height / Höhe: 9,88 / 3,02 m
Wing area / Flügelfläche: 458 sqft / 42,58 m²

Weights / Gewicht:

Empty weight / Leergewicht: 6462 lbs / 2927 kg
MTOW / Max. Startgewicht: 10300 lbs / 4672 kg
Payload / Nutzlast: 2200 lbs / 1031 kg
Fuel load / Treibstoff: 280 USGal = 1680 lbs / 761 kg = 1060 Liter

Performances / Leistungen:

Cruise Speed / Reisegeschwindigkeit: (161 KIAS) @2200 rpm and 5000 ft MSL / 298 km/h
Economic cruise / Optionale Reisegeschw.: (157 KIAS) for less fuel burn / 290 km/h
Max speed / Höchstgeschwindigkeit: (175 KIAS) / 325 km/h
Landing speed / Landegeschwindigkeit: (57 kts) / 105 km/h
Stall speed, clean / Abreisgeschw. : (65 kts) / 120 km/h
Max climb rate / Steigleistung max: (1360 ft/min) at sea level / 6,9 m/s
max. range / Max. Reichweite: (705 NM) / 1305 km
ceiling altitude / Dienstgipfelhöhe: (19400 ft) / 5915 m

Powerplant / Antrieb:

Engines / Motoren: 2x times 9 cyl-radial, aircooled P&W Wasp-Junior SB
max. Power / Motorleistung max: 457 HP @ 2300 rpm, per engine
Cruise power / Motorleistung nom: 400 HP @ 2200 rpm, per engine
RPM cruise / Drehzahl Reise: 2100 U/min
RPM Max continous / Drehzahl max dauer: 2200 U/min
RPM Max short / Drehzahl max kurz: 2300 U/min
Combustion volume / Hubraum: 9 x 109.4 cuin = 985 cuin (16.1 Liters)
Compression rate / Verdichtung: 6:1
Propeller: 2 Blade Metal, constant speed
Prop Gear Ratio: 1:1

Limits:

Gear down: 120 KIAS
Flaps deploy: 135 KIAS

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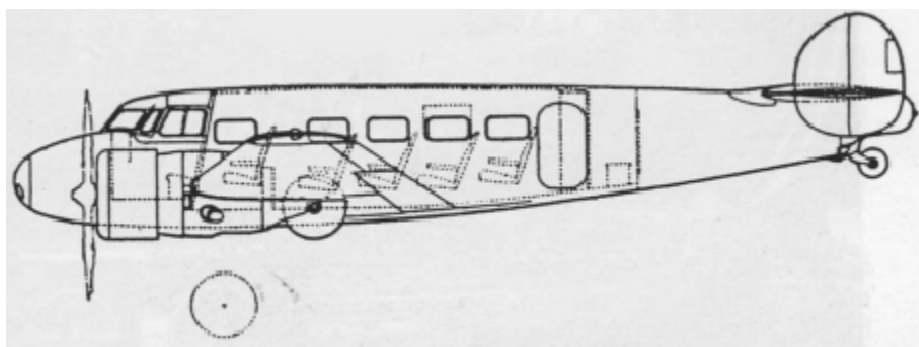
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Electra history



In the summer of 1932 Robert Gross determined that the reborn Lockheed should start fresh with the very latest type of aircraft. Initially, it was to embody the usual low-drag and single engine design, but other development dictated major changes.

In February 1933 Boeing launched its revolutionary model 247 which was the first low-drag twin engine all metal transport. Seating 10 passengers in comfort, it was 50 MPH faster than any other airliner in service. Five months later Douglas introduced their DC-1 which was even faster and had more payload than the Boeing. The impact of these two, and later the improved DC-2 compelled Lockheed to rethink their new plane and design a twin engine transport that would surpass its competitors. It was decided that the model 10 was laid out as a twin engine, all metal, ten passenger plane, with a crew of two and a toilet compartment. Baggage could be loaded into the nose, and sometimes also into the rear fuselage. There were also small baggage areas in the tops of each wing. It had an all metal stressed skin fuselage, motor driven retractable landing gear, and retractable flaps, something that the Boeing did not have. It was also faster than the Boeing, and competitive with the DC-2.





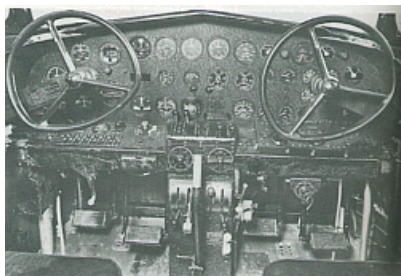
Marshall Headle ...



... and his team.

The first Model 10 Electra was tested by Marshall Headle at Mines Field, Los Angeles on February 23, 1934. Northwest Airways and Pan American placed the first orders and it first went into service with Northwest in June 1934, and within twelve months they operated a fleet of thirteen aircraft.

Eventually four main versions of the Electra were produced. L 10-A with Pratt and Whitney Wasp Junior R-985SB/SB-3 engines. The model B with Wright Whirlwind R-975-E3s, the Model C with Wasp SC-1s, and the Model E with Wasp R 1340 S3H-1 engines.



Cockpit and cabin inside looking





Lockheed L-10 and L-14 from Guinea Airways

The Electra was an immediate success. At its introduction it was one of the fastest airliners available and orders flowed in from all over the world, with eventual sales to 23 airlines in 13 countries. The total number of Model 10A was 107 the model B was 19, the model C was 8, and the Model E was 15. In all, 115 went to airlines, 7 to the US Government, 2 to the Argentine Government, and 25 to private customers.



Pilots Donald MacLaren (right) and Herbert Hollick-Kenyon (centre) posing before CF-AZY with Col. Jimmy Doolittle at Burbank.

First operators were in **USA**: Northwest Airlines, Pacific/ Pan Alaska Airways, Northeast Airlines, Delta Air Lines, Eastern Air Lines, Mid-Continent Airlines, National Airways; in **Canada**: TCA, Canadian Airways; in **Southamerica**: Compania Mexicana de Aviacion, Compania Cubana de Aviacion, Linea Aeropostal Venezolana, Panair do Brasil, LAN Chile, VARIG, KLM Westindies; in **Australia & Pacific**: MacRobertson-Miller Aviation (MMA), Guinea Airways, Union Airways; in **Europe**: British Airways, LOT, LARES, Aeroput. The last Airline to purchase the Electra was LAN Chile, in July 1941.



L-10A from British Airways



During WW II. many Electras were confiscated and used by UAAC and RAF. Some of the 10 Polish LOT Electras got into German hand and were used in different transportation units of the German Luftwaffe.



The military version of the L-10A: Y1C-36 of the US Army Air Corps (UAAC)

Several Electras achieved fame. The first round-trip of the Atlantic by an airline was by an Eastern Airlines L-10 A in May 1937, carrying first film of the Hindenburg disaster, and returning to the US with films of the coronation of King George VI. ... and of course it was a Lockheed Electra L 10 E that Amelia chose for her ill fated around the world flight in 1937.

[Contrary to other statements the British Prime Minister Chamberlain wasn't flown to Munich in September 1938 to meet with Adolf Hitler in a British Airways L-10-A but in a L-14 (G-AFGN)].



Amelia Earhart in flight - Oakland to Honolulu 1937

The Electra was finally replaced by the success of the Douglas DC-3 in airline service, but many Electras were used by companies as executive aircraft, and it was still in service as late as 1965 in regular service by Provincetown Boston Airline on the route between Boston and the island community on the tip of Cape Cod.

As of August 1998 there are three model 10-A's still airworthy, and one Model E. It is owned by Ms. Linda Finch in San Antonio Texas, and she flew her Electra on a successful recreation of Amelia Earhart's around the world flight.



We will continue ...