

Ilyushin IL-12

Modelled for Flight Simulator X

And

Flight Simulator 2004 (A Century of Flight)

by

Jens B. Kristensen

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Ilyushin IL-12



Introduction

The IL-12 was developed during the last years of World War 2, because Sergey Ilyushin believed there would be a need for a modern airliner in the post-war years, to replace the Lisunov LI-2 (Soviet-built DC-3). The IL-12 was an important part of the Aeroflot fleet, although it was replaced on international routes by the more efficient IL-14.

At the time, it was believed in the West that many thousands were built, but the actual number was 663 [ref. 1]. Most of them were used in the USSR itself, by Aeroflot and the air force, so, unlike the IL-14, only a few other airlines had the IL-12, for example CSA (Czechoslovak Airlines) and LOT (Polish Airlines).

The first examples entered service with Aeroflot in 1947. In 1948 production switched to the IL-12B which had a dorsal fin extension.

This package contains several versions:

- Aeroflot IL-12 of 1949
- Aeroflot IL-12B of 1950
- LOT IL-12B, ca 1957
- CSA (Czechoslovak Airlines) IL-12B, 1949



LOT Polish Airlines was one of relatively few IL-12 operators.

Technical data

Span:	104 feet (31.7 m)
Length:	69 feet 11 inches (21.31 m).
Payload	4500 lbs (2040 kg)
Gross weight:	35000 lbs (16100 kg)
Cruising speed:	205 mph (330 km/h)
Practical range:	932 miles (1500 km)
Power:	Four 1850-hp Shvetsov Ash-82FN radial piston engines
Accommodation:	Crew: 6, and 18-32 passengers.

References

1. Scale drawings and much other information: Yefim Gordon and Dmitriy Komissarov: Ilyushin IL-12 and IL-14, Red Star volume 25, Midland Publishing (Ian Allan) 2005.
2. For making the panel and cockpit, I have also consulted photos found on the internet, mainly at www.airliners.net. I have only seen a single photo of the IL-12 cockpit, in reference (1) above, so much is based on photos of the IL-14 cockpit.

Flying the Aircraft

The panel



The model is best flown from the virtual cockpit, but there is a 2D panel as well.

The gauges are calibrated in metrical units (altitude in km, airspeed km/h, vertical speed in m/s, manifold pressure in mmHg), but the tooltips show the more familiar U.S. units (feet, knots etc).

Note the autopilot controls between the pilots, just below the windscreen. The autopilot of the IL-14 was basically similar to the Sperry autopilot fitted to western aircraft like the Douglas DC-3. Please see the FS Learning Center for detailed instructions. The autopilot defaults to 'heading hold', so it is best to engage it with the keyboard: Press CTRL+SHIFT+H followed by CTRL+H.

Additional autopilot functions (cheats, actually):

Engage altitude hold: Press CTRL+Z when you are at the desired altitude.

Disengage altitude hold: Press Z+Z (that's Z two times).

The usual AP keyboard shortcuts also work, including ILS approach hold (CTRL+A).

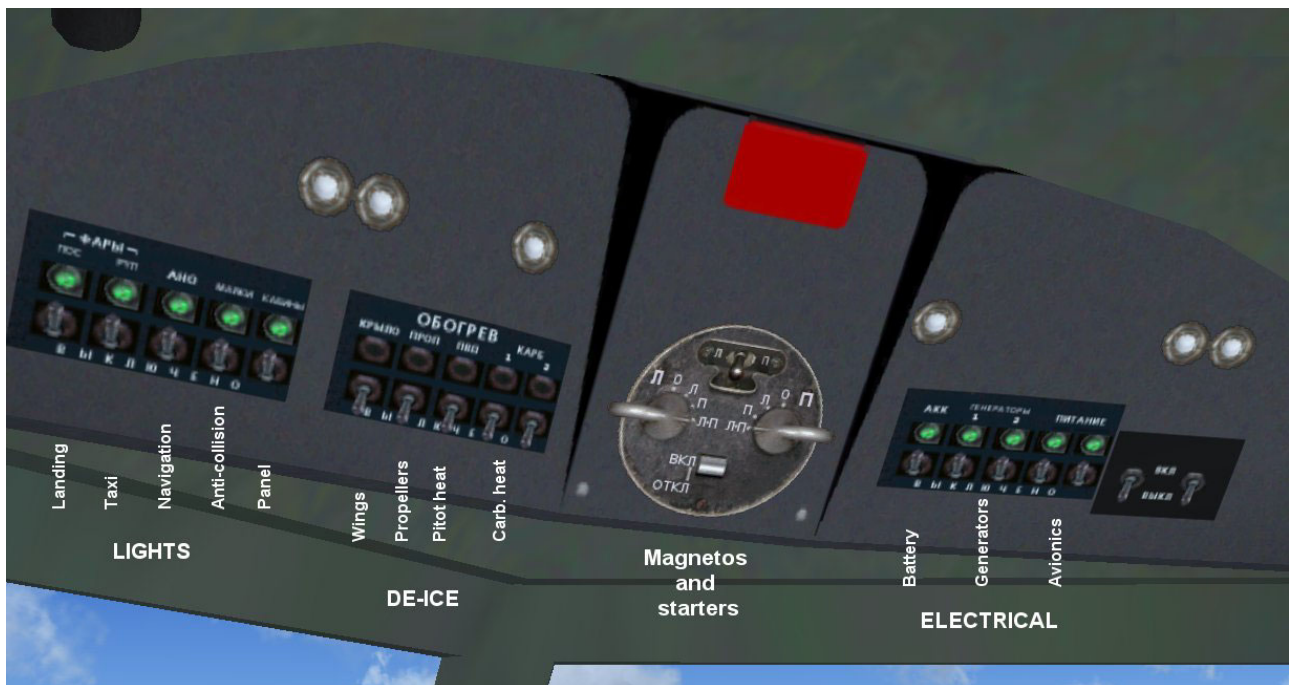
Please see the Readme.txt file for gauge credits. Some gauges are by myself, others are modified from FS2004 Microsoft gauges or from various freeware sources, used with permission.

Other panels

Shift+2 Radios, borrowed from the stock Flight Simulator DC-3, with text translated into Russian.

Shift+3 The GPS windows. Of course, GPS didn't exist at that time.

Shift+4 A throttle quadrant, borrowed from the Flight Simulator DC-3, and mainly intended for use in the 2D-panel.



Shift+5 The overhead panel. Here it is shown as it looks in the Virtual Cockpit, with some explanations added. Also here you can use the tooltips to easily identify the switches.

Flying instructions

The following information is available during your flight, just call up the electronic kneeboard, and select the reference tab.

The IL-12 has two Shvetsov Ash-82T 14-cylinder radial engines. Each provides 1900 hp for take off at sea level.

Before take-off

Cowl flaps closed

No trimming necessary

Flaps to take-off position (20 degrees, press F7 twice)

Take-off

Full throttle and RPM.

Rotate at 85 KIAS

Establish positive rate of climb.

Landing gear up.

Let the aircraft accelerate to 115 KIAS at approx. 6 m/s (1200 fpm)

At 500 feet AGL:

Cowl flaps one stage open

Retract flaps

Initial climb

Cowl flaps two stages open

1040 mmHg MAP (41 inches)

2400 RPM

130 KIAS

Climb 2000 feet AGL

En route climb

Cowl flaps one stage open

2350 RPM

1000 mmHg MAP (39.4 inches)

Minimum 2.5 m/s (500 fpm) climb rate, airspeed 130-140 KIAS.

Cruise

Cowl flaps closed

Maximum cruise 2200 RPM, 850 mmHg MAP (33.5 inches).

Normal cruise 2100 RPM, 800 mmHg MAP (31.5 inches).

Cruise at low weight or at low altitudes: Down to 1600 RPM and 760 mmHg MAP (30 inches)

Descent

Cowl flaps 0-1 stage open

2100 RPM

Reduce MAP in stages of 3 inches per minute.

Minimum 600 mmHg MAP (24 inches)

Holding

Cowl flaps 0-1 stage open

2100 RPM

Obtain 150 KIAS

Approach and Landing

Cowl flaps two stages open, 2200 RPM

Reduce to 140 KIAS, flaps stage 1

Nearing Glideslope, reduce to 125 KIAS.

Extend landing gear, flaps stage 2 (20 degrees)

On descending: 30 degrees of flaps.

At 500 ft AGL: Full flaps (45 degrees)

Cross airfield boundary at 90 KIAS.

Touchdown at 80 KIAS

After touchdown:

Cowl flaps fully open. Flaps up

Wheel brakes as required