IAI Westwind

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Jet Commander/Westwind

From IAI 1124 Westwind

Role Business jet

Manufacturer: <u>Israel Aircraft Industries</u>

First flight 2 January 1963

Introduced 1965

Status Active service

Primary user Pel-Air

Produced 1965-1987

Number built 442

Developed from Aero Commander 500

Variants IAI Astra . Gulfstream G100



The Israel Aircraft Industries (IAI) Westwind is a business jet that became a cornerstone of the <u>Israeli</u> aircraft manufacturing industry and remained in production for twenty years. Usually set up for seven passengers, it can carry as many as ten, or be quickly reconfigured as a fast air freight aircraft.

Development

The Westwind was originally designed in the United States by <u>Aero Commander</u> as a development of its twin-propeller namesake aircraft, first flying on 2 January 1963 as the **Aero Commander 1121 Jet Commander**^[1]. It was of broadly conventional business jet arrangement, with two engines mounted in nacelles carried on the rear fuselage. However the wings were mounted halfway up the fuselage instead of the typical low-wing arrangement of aircraft in this class. After successful testing, the aircraft was put into series production with deliveries to customers beginning in early 1965^[1].

Shortly thereafter, Aero Commander was acquired by North American Rockwell. The Jet Commander created a problem, since Rockwell already had an executive jet of its own design, the Sabreliner, and could not keep both in production because of anti-trust laws. It was therefore decided to sell off the rights to the Jet Commander, which were purchased by IAI in 1968^[1].

Jet Commander production amounted to 150 aircraft in the United States and Israel before IAI undertook a series of modifications to create the **1123 Westwind**. These included stretching the fuselage and increased maximum takeoff, maximum landing, and maximum zero-fuel weights, with the wing modified to incorporate double-slotted flaps and drooped leading edges and tip tanks. The trimmable horizontal stabiliser was also modified to have increased span and more travel^[2]. Not long after the aircraft went into production, the original turbojet engines were replaced by more fuel-efficient Garrett TFE731 turbofans^[1] There were also numerous airframe modifications, such as drooped leading edges on the wings, a dorsal fin, revised engine pylons and nacelles, and further increases in maximum takeoff, maximum landing, and maximum zero-

fuel weights. With improvements to a number of onboard systems incorporated as well, these changes resulted in the **1124 Westwind**^[2] delivered from 1976^[1].

In 1976, in the wake of the terrorist takeover of the Savoy hotel in Tel Aviv, the <u>Israeli Air Force</u> decided to use the Westwind as the basis for a maritime patrol aircraft, which became known as the **IAI Sea Scan**.

In 1980 deliveries of the Model 1124A commenced; modifications included a new wing centresection and the addition of <u>winglets</u> to the tips. The revamped aircraft was called the **Westwind II**, replacing the original design in production. IAI built its last Westwind in 1987, after a total of 442 Jet Commanders and Westwinds had been built, switching production to the <u>Astra^[1]</u>.

Variants

Aero Commander

1121 Jet Commander

Original production version, powered by two General Electric CJ610-1 engines developing 2,850 lbf each; or modified with two CJ610-5 engines developing 2,950 lbf each. 120 built including two prototypes^[2].

1121A

Slightly modified version with CJ610-1 engines. Eleven built^[2].

1121B Commodore

Version manufactured with CJ610-5 engines. Nineteen built^[2].

1122

Improved version developed but not put into production; two aircraft built and subsequently converted to 1123 Westwinds^[2].

IAI

Westwind II

1123 Westwind

Improved version of the 1121. The cabin was stretched by 0.51m (1ft 8in) and the aircraft was fitted with more powerful CJ610-9 engines developing 3,100 lbf each and a Microturbo Saphir III auxiliary power unit (APU)^[2]. 36 built^[1]

1124 Westwind

Greatly improved version powered by two Garrett TFE731-3-1G turbofan engines developing 3,700 lbf each, APU deleted^[2].

1124 Westwind I

Name given to 1124 after introduction of Westwind $II^{[1]}$.

1124N Sea Scan

Maritime surveillance aircraft^[1].

1124A Westwind II

Refined version of the 1124 built from 1980 onwards^[1].

Operators

- Canada
- Chile
- Germany
- Guatemala
- Honduras
- <u>Israel</u>
- <u>Uganda</u>

Specifications (1124A Westwind II)

General characteristics

- **Crew:** Two (pilot & co-pilot)
- Capacity: Up to 10 passengers
- **Length:** 15.93 m (52 ft 3 in)
- **Wingspan:** 13.65 m (44 ft 5 in)
- **Height:** 4.81 m (15 ft 10 in)
- **Wing area:** 28.6 m² (308 ft²)
- **Empty weight:** 6,010 kg (13,250 lb)
- **Max takeoff weight:** 10,660 kg (23,500 lb)
- Powerplant: 2× Garrett TFE731-3-1G turbofan engines, 16.5 kN (3,700 lbf) each

Performance

- **Maximum speed:** 868 km/h (365 knots indicated, 544 mph)
- **Range:** 4,430 km (2,392 nm, 2,770 mi)
- **Service ceiling:** 13,720 m (45,000 ft)