RL. 892-0000

AVRO CANADA

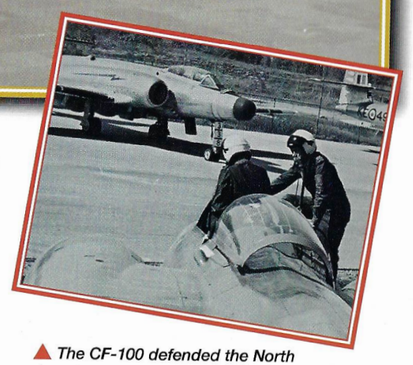
CF-100 CANUCK

● All-weather fighter ● Operational trainer ● ECM platform

NUMBER 66 GROUP 4

WARPLANES OF THE 1950s, 1960s AND 1970s

When a pilot strapped into the CF-100 Canuck, he was flying an excellent, all-weather warplane that was also Canada's first jet fighter. Avro Canada manufactured this two-seat, twin-engine machine for the express purpose of defending North America from bomber attack. A superb design of the early 1950s, this ship was one of the best-liked crafts ever to equip a squadron. It survived in service until the early 1980s, by which time it had been relegated to ECM (electronic countermeasures) missions and other second-line duties.



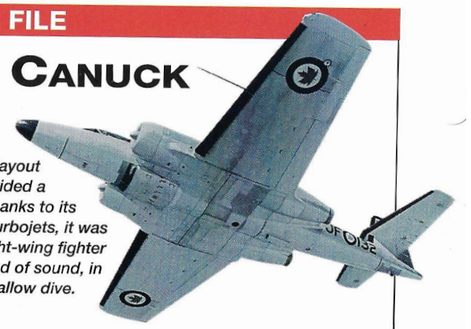
▲ *The CF-100 defended the North American continent from attack. After the cancellation of its intended successor, the CF-105 Arrow, the Canuck would remain in service with the Canadian Air Force in various roles for a total of nearly 30 years.*

PHOTO FILE

AVRO CANADA CF-100 CANUCK

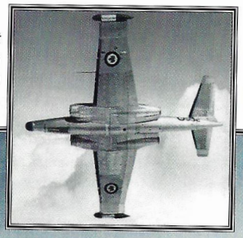
High ▶ performance jet

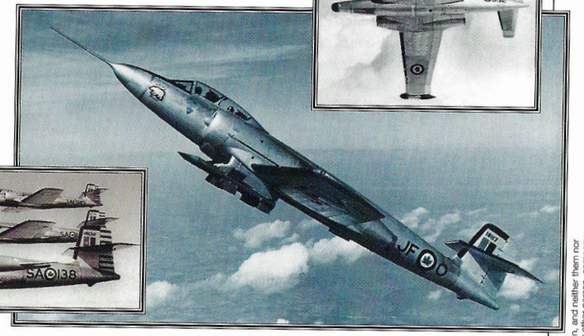
The straight-wing layout of the CF-100 provided a stable platform. Thanks to its powerful Orenda turbojets, it was also the first straight-wing fighter to exceed the speed of sound, in 1952, albeit in a shallow dive.



Air-to-air rockets ▶

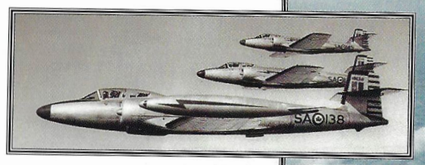
The CF-100 Mk 4 introduced rocket armament, comprising 29 70-mm unguided rockets in each wingtip, plus an additional 48 rockets in the ventral tray.





▲ All-weather radar

Early CF-100s carried the Westinghouse APG-33 radar in the nose, and eight machine guns in a ventral pack. Later versions carried an APG-40 radar.



▲ Defense initiative

With the Royal Canadian Air Force, the CF-100 Canuck participated in the joint defense of the North American continent with the U.S. Air Defense Command, under NORAD.

▲ Missile research

The Mk 3 was modified for the testing of the Velvet Glove missile. This weapon combination never became operational.

◀ Rocket-assisted takeoff

The CF-100 had provision for RATO bottles under the rear fuselage, though these were rarely used in squadron service.

FACTS AND FIGURES

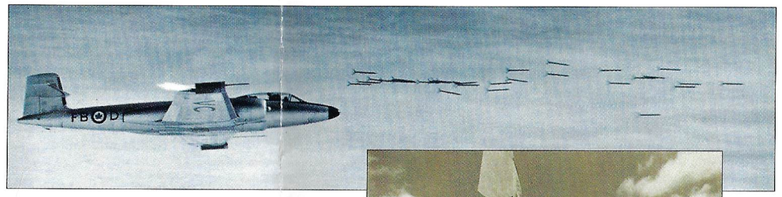
- Four CF-100 squadrons were based in Europe, providing NATO allies with valuable all-weather defense.
- Some 692 Canucks were built for Canada and 53 were exported to Belgium.
- Painted all-black, the CF-100 prototype made its maiden flight in January 1950.
- Belgium's sole CF-100 squadron was stationed at Beauvechain and was also committed to NATO defense.
- A few CF-100s were completed as conversion trainers.
- The backseat passenger was a radar operator using the APG-40 fire control system.

Canada's first supersonic jet

Avro Canada began to design its first jet in 1946 and flew the CF-100 in 1950. This long-range interceptor became the backbone of Canada's contribution to the defense of North America and Western Europe. Although it lacked the swept wings that became standard on most combat aircraft, the CF-100 was a fine all-weather fighter, its stability making it an excellent weapon platform and easy to fly on instruments. Pilots also found the Canuck (a slang term for a Canadian) an easy aircraft to handle at lower speeds when landing or maneuvering in the airfield pattern. This was no dogfighter, but for a 90-degree attack on a bomber formation using air-to-air rocket projectiles, the CF-100 was potent.

The CF-100 flew alongside American interceptors like the Northrop F-89 Scorpion and Lockheed F-94 Starfire, but these never earned the affection Canadians bestowed on their airplane. From 1951 to 1981, the CF-100 was a treasure to every pilot who flew it.

The definitive model of the CF-100 was the Mk 5, which introduced upgraded powerplants and enhanced aerodynamics.



Above: Unguided air-to-air rockets were first introduced on the CF-100 Mk 4, proving a great improvement over the machine gun armament of the Mk 3. A total of 116 could be carried.

The only export customer for the Canuck was Belgium, which purchased 53 Mk 5s. All of which served with the 1st All-Weather Interceptor Wing based at Beauvechain. Some Canadian CF-100s were also based in Europe and used for electronic warfare.

Above: The twin Canadian-built Orenda turbojets were non-afterburning units, but provided a useful amount of thrust as well as fuel efficiency and reliability for long-range patrol missions.

SPECIFICATIONS
CF-100 Canuck Mk 5

Type: Two-seat all-weather fighter.

Powerplant: Two 7,260-lb.-thrust Orenda 11 or 14 turbojet engines.

Maximum speed: 649 m.p.h. at 10,000 ft.

Service ceiling: 54,000 ft.

Combat radius: 650 mi.

Range: 2,000 mi.

Weapons: 29 70-mm "Mighty Mouse" folding-fin aircraft rockets (FFAR) in each wingtip pod; 48 more FFAR or eight 12.7-mm (.50 cal.) machine guns on some versions.

Weights: Empty 23,052 lb.; max takeoff 36,923 lb.

Dimensions:

Span	58 ft.
Length	54 ft. 1 in.
Height	15 ft. 6 in.
Wing area	591 sq. ft.

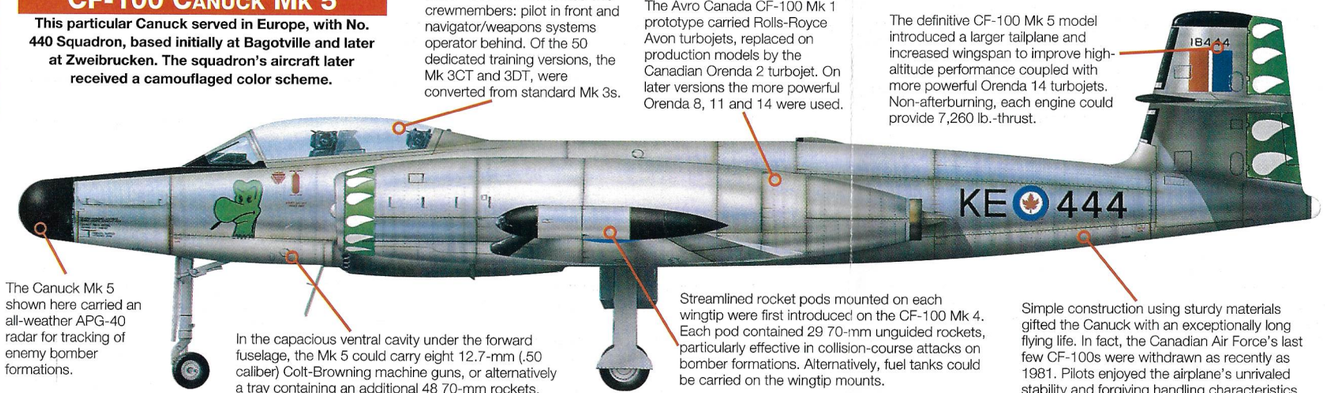
CF-100 Canuck Mk 5

This particular Canuck served in Europe, with No. 440 Squadron, based initially at Bagotville and later at Zweibrucken. The squadron's aircraft later received a camouflaged color scheme.

All CF-100 variants carried two crewmembers: pilot in front and navigator/weapons systems operator behind. Of the 50 dedicated training versions, the Mk 3CT and 3DT, were converted from standard Mk 3s.

The Avro Canada CF-100 Mk 1 prototype carried Rolls-Royce Avon turbojets, replaced on production models by the Canadian Orenda 2 turbojet. On later versions the more powerful Orenda 8, 11 and 14 were used.

The definitive CF-100 Mk 5 model introduced a larger tailplane and increased wingspan to improve high-altitude performance coupled with more powerful Orenda 14 turbojets. Non-afterburning, each engine could provide 7,260 lb.-thrust.



The Canuck Mk 5 shown here carried an all-weather APG-40 radar for tracking of enemy bomber formations.

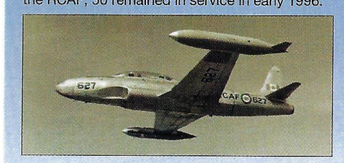
In the capacious ventral cavity under the forward fuselage, the Mk 5 could carry eight 12.7-mm (.50 caliber) Colt-Browning machine guns, or alternatively a tray containing an additional 48 70-mm rockets.

Streamlined rocket pods mounted on each wingtip were first introduced on the CF-100 Mk 4. Each pod contained 29 70-mm unguided rockets, particularly effective in collision-course attacks on bomber formations. Alternatively, fuel tanks could be carried on the wingtip mounts.

Simple construction using sturdy materials gifted the Canuck with an exceptionally long flying life. In fact, the Canadian Air Force's last few CF-100s were withdrawn as recently as 1981. Pilots enjoyed the airplane's unrivaled stability and forgiving handling characteristics.

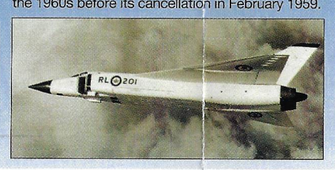
Canadian-built jets

CANADAIR SILVER STAR: A licensed-built version of the Lockheed T-33 with Nene engine, this aircraft served as an advanced trainer with the RCAF, 50 remained in service in early 1996.



CANADAIR SABRE: A Canadian-built F-86, the Sabre served with no fewer than 16 RCAF squadrons until replaced by the CF-100. In the early 1950s the Sabre served in Europe and the U.K.

AVRO CANADA CF-105 ARROW: The intended replacement for the CF-100, the Arrow would have been the most potent interceptor of the 1960s before its cancellation in February 1959.

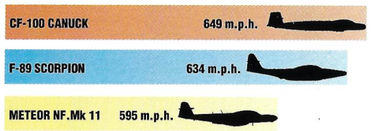


CANADAIR CF-104: Canada began to license-build the Lockheed Starfighter after the cancellation of the CF-105. Later, these aircraft were tasked with strike/reconnaissance.

ACTION DATA

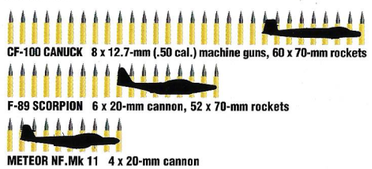
SPEED

Straight-wing all-weather fighters were heavy and ungainly machines compared to the lightweight air superiority fighters like the F-104 and MiG-17, but just as deadly in their own role.



WEAPONS

Machine-gun armament was thought of as a weakness in the 1950s. By then most aircraft were being equipped with rockets and cannon.



RANGE

For defending the North American continent, the CF-100 had very long range to catch incoming bombers over the ocean.