



B-200 King Air Research/Support Aircraft



Two Beechcraft B200 Super King Air mission support aircraft operated by NASA's Armstrong Flight Research Center fly in formation over Rogers Dry Lake at Edwards AFB. (NASA/Jim Ross) (ED08-0141-10)

NASA Armstrong Flight Research Center operates two Beechcraft B200 Super King Air aircraft for flight research and mission support. One of Armstrong's King Air aircraft, NASA 801, (N801NA) serves as a testbed for various research projects, and is also flown for a range of mission support activities. The other aircraft, NASA 7 (N7NA), can carry up to 11 passengers and is primarily used for pilot proficiency and for transporting personnel on NASA business to locations not served by regular airlines.

Experiments flown on King Air #801

King Air N801NA has been the test aircraft for a variety of flight experiments, among them:

- The Hi-rate Wireless Airborne Networking Demonstration (HiWAND). This research project flown in late 2005 demonstrated wireless modem and data transmission capability

over the Internet from the aircraft via a line-of-sight telemetry link.

- The X-38 Space-Integrated GPS Inertial Navigation System experiment was flown on 801. It led to the GN&C system now on ISS.
- The Flying Infrared for Low-Level Operations project, an experiment flown on NASA 801, dealt with night vision devices and low altitude operations.

About the aircraft

The Beechcraft King Air is a widely deployed general aviation aircraft, commonly used for business travel, express cargo delivery and related purposes. The U.S. military also operates the King Air as the C-12 Huron utility transport. Based upon the earlier King Air 100, the King Air 200 was developed in the early 1970s with the first flight of the prototype in October 1972. The King Air 200 was awarded its



NASA's Beechcraft B-200 Super King Air is shown on the ramp at the Armstrong Flight Research Center. The twin-turboprop aircraft, used for both research and mission support functions, recently was fitted with wingtip winglets that improve aerodynamic efficiency and reduce fuel burn. (NASA/Carla Thomas) (ED12-0345-09)

airworthiness certificate by the Federal Aviation Administration under FAR Part 23 in December 1973.

The B200 Super King Air is an evolutionary aircraft that has better performance than the original King Air 200 due to upgraded engines. NASA acquired its two Super King Air aircraft in the early 1980s, NASA 7 in 1981 and NASA 801 in 1983.

Aircraft Specifications

Wingspan: 54'6"

Wing aspect ratio: 9.8 to 1

Wing loading, maximum: 41.3 lbs/sq ft

Length: 43'9"

Height: 15'

Empty weight: 7,315 lbs

Maximum takeoff weight: 12,500 lbs

Engines: Two United Aircraft of Canada PT6A-42 turboprop engines rated at 850 shp driving three-blade constant-speed full-feathering reversible propellers

Crew: two pilots, with full dual controls and instruments

Payload: Up to 11 passengers, depending on cabin configuration. Up to 400 lbs baggage in rear compartment.

NASA 7 also has additional cargo stowage in an under-belly container.

Service ceiling: 32,800 feet

Maximum speed at 15,000 feet: 289 knots (333 mph)

Cruising speed at 25,000 feet at average weight: 273 knots (313 mph)

Stalling speed, full flaps: 76 knots (87 mph)

Maximum range: 915 to 1,800 nm (1,053 to 2,075

statute miles) at 27,000 feet with full fuel, depending on payload

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