

# Beechcraft

**Raytheon** Aircraft Company



## Royal Refinement A Timeline of the Beechcraft King Air

Nearly 6,000 Beechcraft King Airs of 17 variants have been sold since the product line was introduced in 1964, making this the most successful series of twin turbine-powered business aircraft ever built. The aircraft fly in corporate, commercial and special mission operations in more than 94 countries throughout the world, and the King Air fleet has accumulated more than 40 million operating hours.

The following milestones tell a story about one of the most popular aircraft in the world – one that is continually updated with the most recent technological innovations. Competitors have come and gone, and the King Air keeps flying. Owners and pilots understand that this is a very versatile aircraft that can perform practically any mission required.

### 1960s

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**May 15, 1963** – Beech Aircraft Corporation begins test flights of a twin-turboprop test bed aircraft equipped with two Pratt & Whitney PT-6 turbojet engines rated at 650 shaft horsepower each.

**Aug. 14, 1963** – Beech announces the availability for firm delivery in the fall of 1964 of the new, pressurized twin-turboprop Model 90 Beechcraft King Air – a six- to eight-place business airplane with 270 mph cruising speed, over-the-weather operating capability, and

slow-speed landing permitting safe use of small fields and airstrips. Within 90 days, the company takes orders totaling \$10.8 million for the aircraft.

**Jan. 20, 1964** – The Model 90 King Air takes its maiden flight. Firm orders and cash deposits total more than \$12 million.

**May 27, 1964** – Coronation Day. The Beechcraft King Air Model 90 receives its Type Certificate from the FAA.



*First flight, Jan. 20, 1964*

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**June 8, 1964** – Beech sets the initial price at \$320,000 for a fully equipped King Air.

**July 7, 1964** – First corporate delivery to United Aircraft of Canada, Ltd.

**Sept. 4, 1964** – A Beechcraft King Air 90 begins an overseas sales tour, traveling from Gander, Newfoundland, to Paris in nine hours and 50 minutes, at an average ground speed of 264 mph. The aircraft visits 38 countries in Europe, the Middle East and Africa, making 454 landings in 91 cities and conducting 771 business, military and government demonstrations.

**Sept. 9, 1964** – The first production aircraft – the sixth King Air built – rolls off the assembly line.

**April 1965** – An engineering modification allows the licensed weight of the King Air to increase by 300 pounds of useful load.

**January 1966** – Beech delivers the 100th King Air. The King Air A90 goes into production featuring increased cabin pressurization and 50 more horsepower per engine.

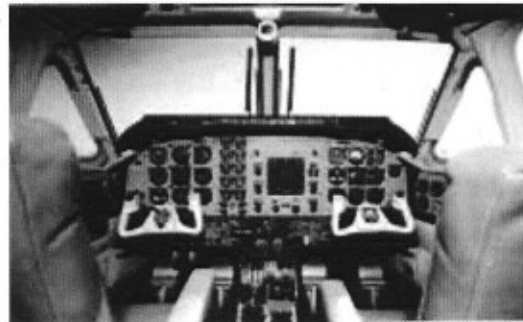
**December 1966** – Beech ends the year with \$24 million in King Air sales and 216 total King Airs delivered.

**1966** – Beech is awarded a \$9.8 million contract from the U.S. Army for 48 U-21 aircraft – military versions of the King Air – for pilot training. The order marks the first of more than a thousand King Airs built for U.S. military forces and governments around the world.

**September 1968** – Beech delivers 400th King Air.

**December 1968** – The Beechcraft King Air ends the year as the top selling corporate turbine aircraft four years in a row, accounting for nearly 77 percent of all deliveries in its class.

**May 23, 1969** – Beech introduces the King Air 100, to be produced in conjunction with the Model 90. With a gross weight of 10,600 pounds, its payload would amount to more than two tons. Featuring twin Pratt & Whitney PA-6A-28 reverse-flow, free-spool turbine engines rated 680 horsepower each, the 100 cruises at 287 mph and offers overall performance greater than the Model 90. Advance orders of \$25 million are taken. FAA certification is achieved in July. First delivery is Sept. 5.



*King Air 100 cockpit*

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# Beechcraft

## 1970s

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**April 20, 1970** – The U.S. Army awards a \$12.3 million contract for additional RU-21E aircraft.

**Aug. 12, 1970** – The 500th King Air is delivered to Beechcraft dealer Dan Meisinger, president of Topeka (Kan.) Aircraft Sales and Service.

**Sept. 23, 1970** – A King Air 100 is the 30,000th Beechcraft airplane to be delivered since 1932. Total value of those sales – more than \$2.5 billion.

**Sept. 29, 1970** – First flight of the Model C90. With a wingspan of 50 feet, three inches, the PT6A-20A turboprop engines developing 550 shp for takeoff. Empty weight was 5,680 lbs. with a gross weight of 9,650 lbs. Seating six comfortably in its pressurized cabin, the C90 cost \$399,500 including complete anti-ice/deice equipment and avionics. Maximum cruising speed was 253 mph, initial rate of climb 2,000 fpm and the C90 could reach a service ceiling of 25,600 feet.



*King Air C90*

**1971**— The Model A100 King Air replaces the Model 100. Basically an advanced version, the A100 features a 900-lb. increase in maximum takeoff gross weight to 11,500 lbs., carried an additional 96 gallons of fuel that stretched range to 1,542 statute miles at an altitude of 21,000 feet. Four-blade propellers with shorter span improved ground clearance during taxi and landing operations. The A100 cruised at 271 mph at 21,000 feet and could climb to a service ceiling of 24,850 feet.

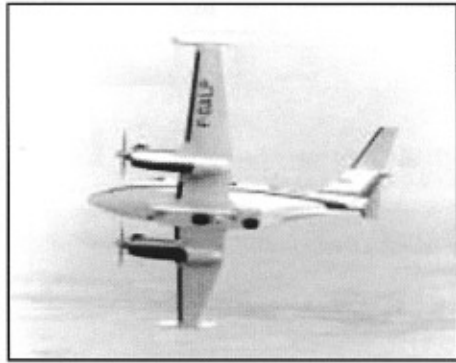
**1971** – The U.S. Army purchases five Model A100 King Airs to serve as pressurized transports designated U-21F.

**Jan. 18, 1972** – first flight of the Model E90. Mounting PT6A-28 turboprop engines of 680 shp flat-rated to 550 shp, the Model E90 was very similar to the Model C90. Pressurization remained the same as C90 at 4.6 psid but performance increased with a cruise speed at 16,000 feet of 285 mph and a service ceiling of 27,620 feet. At maximum range power setting, the E90 could fly 1,870 statute miles.

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**Oct. 27, 1972** – First flight of the Model 200 Super King Air. After four years of research and development, Beech introduces the first T-tail King Air, which would go on to become the best-selling King Air of all time. Wind tunnel testing of the tail itself consumed 375 hours. The distinctive T-tail raised the tail out of the wing's downwash, allowing the stabilizer and elevator to operate in relatively smooth, undisturbed air. The Super King Air was powered by two P&W PT6A-41 turboprop engines rated at 850 shp each, and could deliver that power up to 106 degrees F. The aircraft carried 544 gallons of fuel in wing/nacelle tanks and two auxiliary tanks located in the wing center section that was two feet wider than the A100's. Wingspan increased to 54 feet, six inches, length 43 feet, nine inches. With extra power and wingspan, the Model 200's maximum takeoff gross weight was 12,500 lbs., useful load 5,275 lbs., and maximum speed was 333 mph. Model 200's cabin seated up to eight in typical King Air surroundings. Air conditioning was standard along with complete wing/tail/propeller deice and windshield anti-ice equipment. The Model 200 demonstrator, N200KA, carried the name "Free Enterprise."



*The Model 200 serves as the platform for many of the world's special mission aircraft*

**1974** – The first Model 200s to enter military service is designated Model C-12A, and ordered by the U.S. Army and U.S. Air Force.

**March 20, 1975** – First flight of the B100 King Air. Beech engaged a second-source supplier of engines for the successful Model A100 King Air with new Garrett AiResearch TPE-331-6-251B/252 fixed-shaft turboprop powerplants. Producing 840 shp flat-rated to 715 shp, the TPE-331 gave the B100 a maximum cruising speed of 306 mph, with a cabin altitude of 8,000 feet at 21,200 feet. Range was 1,501 statute miles.

**1976** – Beech modifies a Model 200 Super King Air for special mission use. The 200T comes equipped with 50-gallon wing tip tanks for increased endurance and range. Designed for maritime patrol, the aircraft features special large, bulged observation windows in the aft cabin section, surveillance radar housed under the fuselage and a lower fuselage fairing accommodating various photographic equipment for reconnaissance purposes. Electronic control and monitoring consoles are installed in the cabin.

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**Jan. 16, 1978** – First flight of the Model F90 King Air, conceived as an advanced version using a Model E90 fuselage and wings combined with the Model 200 Super King Air's swept T-tail empennage.

Intended as a step-up King Air from the E90, the F90 was equipped with two 750 shp PT6A-135 turboprop engines, seated seven to 10 occupants (including crew) and cruised at 307 mph. To reduce noise level, the four-blade, constant-speed, full-feathering, reversible propellers turned at a maximum 1900 rpm or 1500 rpm for cruise operation. Initial rate of climb



*F90 King Air*

was 2,380 fpm, with a maximum altitude capability of 31,000 feet. The Model F90 has the distinction of being the first King Air equipped with Beech's advanced, multi-bus electrical system that featured automatic load shedding, five separate buses and solid-state current sensors for ground fault protection and bus isolation.

**1976** -- The U.S. Navy awards a contract to Beech for what is eventually 61 Model H90 King Airs for advanced, multi-engine pilot trainers designated T-44A.

**1979** – The U.S. Navy purchases nine Model A200C designated UC-12B for use as personnel and utility transports for both the Navy and Marine Corps. Basically off-the-shelf airplanes, all were equipped with the 52-inch by 52-inch upward-opening cargo door of the commercial model 200C. Twenty-seven additional airplanes were ordered in 1980, another 22 in 1981, and eight in 1982.

## 1980s

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**1981** – The improved C90-1 enters production. Equipped with PT6A-21 engines rated at 550 shp for takeoff and 538 shp for cruise climb and cruise segments of flight, the C90-1 carried 384 gallons of useable fuel and featured a maximum takeoff weight of 9,650 pounds. Pressurization was increased to 5.0 psid providing a cabin altitude of 6,000 feet at 20,000 feet and 12,000 feet cabin altitude at 30,000 feet. Up to 350 lbs. of baggage or remote avionics equipment could be placed in the nose compartment with another 350 lbs. of baggage in the aft cabin section, depending on exact arrangement of cabin seats and options installed. Maximum cruising speed was 273 mph with a range of 1,497 statute miles.

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**1981** – Beech introduces the Model B200. Equipped with PT6A-42 engines that retained a rating of 850 shp but incorporated improved hot section components that enabled better climb and high altitude performance, cruise speed increased to 312 mph, pressurization differential increased to 6.5 psid and zero fuel weight was 11,000 lbs. A double-wide cockpit pedestal made flight deck entry-egress easier and many minor improvements were made to the interior.

**Dec. 7, 1982** – First flight of the Model F90-1 King Air, which features pitot-type engine cowl design that improves air intake characteristics, particularly at high altitude. P&W PT6A-135A turboprop powerplants replaced -135 engines of the F90m but were still rated at 750 shp. Wingspan: 45 feet, 10 ½ inches. Main and auxiliary fuel tanks in the wings hold 388 gallons and the auxiliary tanks, located in the wing center section, hold up to 41 gallons of fuel.

**1983** – The Model C90A incorporated major changes from the earlier Model 90 series, the most important being a completely new powerplant package featuring pitot-type cowlings with improved air intake design and the use of tapered exhaust stacks on the two flat-rated, 550 shp PT6A-21 powerplants. Fuel capacity remained at 384 gallons. Maximum takeoff gross weight was 9,650 lbs. and maximum operating speed was 226 knots IAS. C90A deliveries began in 1984 and each cost \$1,347,800. A higher gross weight C90A was introduced in 1987 with a 10,160-pound maximum ramp weight and maximum takeoff weight of 10,100 lbs.

**Sept. 3, 1983** – The first Model 300 takes its inaugural flight. The Model 300 was certified under Special Federal Aviation Regulation 41C that permitted small, propeller-driven airplanes to exceed 12,500 lbs. maximum gross weight if additional airworthiness criteria were met. Two PT6A-60A turboprop engines rated at 1,050 shp each powered the 300, housed in pitot-type cowlings with four-blade propellers. Beech offered only the 300LW lightweight version (12,500 lbs. gross weight limit) intended for sale in Europe. From 1984-1991, 218 Model 300 and Model 300LW were built.



*Model 300 King Air*

**Sept. 13, 1988** – First flight of the Model 350 Super King Air, which replaces the Model 300. The airplane is certified to Part 23 through Amendment 34 for Commuter Aircraft category of the Federal Aviation Regulations. Powered by two PT6A-60A turboprop engines rated at 1,050 shp each, the 350 featured a fuselage 34 inches longer than the Model 200 and 300 King Airs. Winglets and a completely new interior were highlights of the 350's design. Standard seating included two double-club arrangements. Maximum speed was 362 mph with a range of 1,900 nm.

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## 1990s

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**March 6, 1990** – Beechcraft delivers the first King Air 350 to Tecumseh Products Co. of Tecumseh, Mich. Prior to operating the 350, Tecumseh products flew two King Air 200's.

**August 28, 1990** – The newest member of the King Air family – the C90B – takes its first flight. The aircraft features an upgraded interior with tuned dynamic vibration absorbers strategically located throughout the cabin to reduce airframe vibration. New, dynamically balanced four-blade propellers and a synchrophasing system further reduce cabin sound levels. The first production C90B was fitted with the 10,000th Pratt & Whitney Canada PT6A turboprop delivered to Beech since King Air production began in 1964. PT6A-21 engines rated at 550 shp each powered the C90B.



*King Air C90B over San Francisco*

**Dec. 9, 1991** – The U.S. Drug Enforcement Administration orders four King Air 350C's for use at utility transports. The 350C is a cargo-door equipped version of the Super King Air 350.

**Nov. 19, 1992** – The Royal Malaysian Air Force orders four Beech Super King Air B200T special mission aircraft outfitted for coastal surveillance operations.

**Sept. 21, 1993** – At the NBAA convention, Beech announces improvements to the King Air 350's runway performance. The 350 is approved for maximum takeoff weight departures on a standard day from runways as short as 3,300 feet, compared to the previous figure of 3,737 feet.

**July 25, 1994** – First flight of the King Air C90SE, the first low-cost version of the popular King Air C90. Cost for the aircraft is \$1.696 million – the lowest of any turboprop. The first aircraft is delivered at November's NBAA convention.

**Nov. 15, 1994**— The U.S. Army converts a \$43.9 million option for 12 C-12 King Airs. With the order, the number of C-12s sold to the U.S. military tops 300.

**Feb. 23, 1995** – the 1,500th commercial King Air 200 completes flight testing at the Beech Field in preparation for delivery later in the year. The aircraft, easily recognizable by its T-tail, was introduced in 1974.

**November, 1995** – The King Air 350 becomes the first western jetprop to win certification in Russia.

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**Nov. 15, 1995** – The U.S. Army accepts delivery of its 50th RC-12 Guardrail airplane. Designated the RC-12P, the aircraft is used for intelligence gathering and contains some of the most sophisticated and complex electronics in the Department of Defense inventory.

**April 17, 1996** – Showing its global appeal, a King Air B200C is the first aircraft to land at Hong Kong's new Chek Lap Kok airport. The King Air is owned by the Hong Kong Government Flying Service and is used to calibrate the airport's Instrument Landing System.

**June 24, 1996** – In a milestone unrivaled in the aviation world, Raytheon Aircraft delivers the 5,000th King Air, a 350 to Jeld-Wen, an Oregon manufacturer of doors, windows, millwork and specialty wood products.

**1998** – In 1998, the UltraQuiet active noise control system became standard equipment on the 350. The system significantly reduces sound pressure levels in the cabin and cockpit by acoustically canceling propeller tones as the system introduces sound waves that are of equal frequency and amplitude, but exactly opposite phase to unwanted noise. The UltraQuiet system was designed and manufactured by Ultra Electronics, Ltd., Cambridge.



*The 5,000<sup>th</sup> King Air*

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# Beechcraft

## 2000s

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**July 2002** -- The 350th Beechcraft King Air 350 rolls off the assembly line to be ferried overseas to an Australian customer.

September 2002 -- The 1,800th Beechcraft King Air B200 is delivered to a U.S. customer.

**Oct. 7, 2003** -- After dedicating resources to the Starship, the T-6A, the Premier I and the Hawker Horizon through the late 1980s and all of the 1990s, Raytheon Aircraft resumes its refinement of the King Air with the addition of Collins Pro Line 21 avionics suite as standard equipment on the King Air 350 and B200.

Standard features of the fully integrated King Air Collins Pro Line 21 include:

Pilot and co-pilot Primary Flight Displays (PFD)

– Large 8x10" displays provide a clear view of all critical flight information. These active matrix LCDs have advanced graphical capabilities to provide intuitive, at-a-glance situational awareness for all phases of flight.

Multi Function Display with engine indication (MFD) – Augmenting the flight information on the PDFs, the central MFD provides primary engine information, systems synoptics, checklists and navigational data – including planning maps, present-position maps and heading. Terrain, traffic, lightning, weather radar and other sensor information can also be displayed. In addition, the MFD functions as a reversionary display for the PDF.

Flight Management System (FMS) – Offering a variety of advanced flight planning and navigation capabilities specifically tailored to the King Air 350 and B200, the Collins FMS-3000 takes pilots to a whole new level of awareness and control. Dual FMS is optional.

Remote Radio Tuning Unit (RTU) – A Collins RTU provides "eye-to-eye," centralized control of the Pro Line 21 radio tuning. Selection and entry of all frequencies and pre-sets are coordinated throughout the RTU. A common control scheme for all tuning functions makes pilot interface more efficient.

Other standard features include:

- Dual Flight Directors
- Fail-Passive Auto Pilot
- Single Global Positioning System
- Dual Solid-State AHRS
- Dual Digital Air Data Computers
- Turbulence Detection Radar



*Collins Pro Line 21 cockpit*

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