

BEECHCRAFT A36 BONANZA



MARQUE OF EXCELLENCE

It doesn't get older; it gets better

BY RICHARD L. COLLINS

Since its first flight on December 22, 1945, the Bonanza has had a mystique shared by no other airplane. Fastest in its class, it set the standard for personal aircraft in the post-World War II period. The Bonanza has unprecedented longevity, too. In fact, Bonanzas have been flying for more than 50 percent of the time that powered airplanes have been flying. When it was first built 44 years ago, the oldest possible airplane was not yet 42. In the 1950s, the Bonanza was designated one of the 100 best-designed products of modern time.

The Bonanza started off with the V-tail as its trademark, and that version of the airplane remained in production through 1982. The last one built was serial number 10,403. Beech is currently producing the F33A, A36, and B36TC. The specially priced F33A lists for \$139,850; the A36 adds about a hundred grand to that, and the turbocharged airplane

PHOTOGRAPHY BY MIKE FIZER



adds another \$30,000. For the extra money in the 36s you get a longer fuselage and a passenger cabin that can easily accommodate club seating for four. The A36 is powered by a Continental IO-550 of 300 horsepower, and while the F33A outsells it, the A36 does well in the marketplace and has replaced the V-tail as the airplane people think about when you say Bonanza.

For 1989, the A36 has some nice improvements in the annunciator panel and landing gear warning system. The annunciator lights are now mounted in the glareshield, as in a King Air, and there is a new light that relates to the gear warning improvements. It's a "gear up" light to warn of an unsafe gear condition when certain other conditions are met. If the throttle is reduced beyond a certain low value, or if the flaps are extended with the gear up, you get a light and a horn. On the ground, there's a microswitch in the throttle system to prevent inadvertent gear retraction after landing, something that has happened in the past on Bonanzas and Barons. Squat switches on the landing gear are designed to prevent this, but a faulty one or a bump in the runway has been known to allow gear retraction on the ground when the gear switch is accidentally moved to the Up position after landing. On Bonanzas and Barons, it is especially important to leave things alone after landing until such time as you can look at the switch and verify what it controls before moving the switch. On older airplanes, the gear switch is to the right and the flap switch to the left. On the newer ones, the reverse is true.

The 36s (and the Model 58 Baron) have a big double door to serve the club cabin; these doors can be removed for flight, making the airplane useful for parachutists or for air-to-air photography. Many of the pictures you see in aviation magazines are taken from 36s.

Passengers like the cabin with its facing seats, worktable, and low sound and vibration levels, but the person who pays the bills usually rides in front, in the left front seat. Whether you are going somewhere on business or for personal reasons, the Bonanza is a satisfying airplane, one that you'll look back at with kind thoughts as you walk away.

The new panel, which came to the A36 in 1984 models, along with the increase in horsepower from 285 to 300, is well arranged, and even with a lot of equipment it appears uncluttered. The





The Bonanza A36 club cabin brings the amenities of a cabin-class airplane, including facing seats and a folding table.

small engine instruments appear, well, small at first, but they are so well placed that there's no problem interpreting them. The placement is about the same as on a King Air, and they are the same size as the ones used in the King Air.

The airplane flown for this report had a Bendix/King KFC 150 flight control system and full IFR avionics, as well as a gyro panel on the right side. A stand-by generator would provide power to the transponder, a nav/com, the audio panel, lights, and engine instruments should the primary charging system fail. A stand-by pressure pump is there for instrument power, and last but not least, a yaw damper makes the ride more comfortable, especially for people in the rear of the airplane.

Radar and Stormscope were missing but are available for the A36. Beech offers prop deice, and Goodrich has a full deice boot package for the airplane, although it is not approved for flight in icing conditions.

The Bendix/King KFC 150 does a fine job of flying the airplane. On a coupled

approach it managed to capture the ILS with little ado even after a vector went astray and the airplane flew through the localizer course.

Autopilots are great, but the Bonanza's controls are so nice that most pilots don't give the autopilot all the flying time. Whether taxiing, taking off, climbing, cruising, descending, or landing, the Bonanza feels right. It is a good short-field airplane, or, if the controller asks and you are so inclined, the speed can stay high until on relatively short final. Putting the landing gear down adds a lot of drag and slows the aircraft quickly. The landings are fun, too, and after a few most pilots are able to squeak a Bonanza onto the runway. Spot landings are enjoyable in the airplane, with the landing gear, flaps, and propeller pitch all items to use in modulating the descent and making it come out even with the runway. The excellent visibility is an asset in the traffic pattern.

The first Bonanzas were the fastest in their class, and the Bonanza still goes like the wind, or 176 knots maximum

cruise. Always a good middle-altitude airplane, the nonturbocharged Bonanza will climb to and cruise efficiently at 15,000 feet. Total fuel is 74 gallons, which is good for about four hours with reserves at normal cruise. If the going gets rough, remember that maneuvering speed of the A36 is 141 knots.

Because the Bonanza is such a hot airplane in the used market, the economics of buying a new one are quite good. A 10-year-old A36 will today sell for 86 percent of what it cost when new, according to figures in the *Aircraft Bluebook-Price Digest*. By comparison, a 10-year-old 210 sells for 71 percent of what it cost new. The owner of an A36 bought new in 1979 has seen dollar depreciation of only \$17,310, which is probably one of the smallest numbers on the list of total costs if the airplane has been flown very much.

An airplane that has been flying for as long as the Bonanza has a lot of interesting history. Bonanzas once formed the entire airplane fleet of Central Airlines, which later became a part of Frontier. A



Bonanza flown by Captain Pat Boling set a record on a nonstop hop from Manila to Pendleton, Oregon, almost 7,000 statute miles. A Bonanza was once built with two four-cylinder engines, mounted one atop the other with a gear-box on the front. And there was actually a twin-engine Bonanza certified (not by Beech) before Beech developed the Travel Air and Baron. The Super V had two 180-hp engines on a V-tail Bonanza airframe. Beech tried various changes, including a different wing and landing gear, but the original always won out.

Bonanzas have been outfitted with guns and bombs, and some were modified by the military for use as pilotless drone aircraft.

But the most impressive thing about the Bonanza airframe is how it developed into a complete line of airplanes. The first Twin Bonanza was a larger airplane, but extensive use was made of shapes from the Bonanza. The wing was the same from the engines outboard, and the fuselage was a substantially wider Bonanza fuselage. The true "twin" Bonanza was the 180-hp (each engine) Travel Air, which shares basic airframes with the Bonanza. The more powerful Baron did the same. The first long-body Model 36 was introduced in 1968; the Baron 58 with the same fuselage followed two years later. The Twin Bonanza evolved into the Queen Air—new fuselage but same wings—and the Queen Air developed into the King Air. Along the way, the T-34 military trainer was developed from the Bonanza; it has

since turned into a turboprop, and a version of this was flown with a jet engine to compete with the Cessna T-37 for the U.S. Air Force trainer business. Allison has a turboprop version of the 36 that is certified and available. No other airplane has evolved into so many different things.

To those owning them (or wanting to own them), Bonanzas have always been a rather ultimate personal possession. There are pilots around who have owned scores of the airplanes, trading

for the new model each year. Back in the beginning, the model changes were often substantial, involving horsepower boosts and even structural changes. In recent years, there have been some changes to the Bonanzas—the new instrument panel is a good example—but it is honestly hard to find anything about the airplane that should be changed. Some might scoff at it for being an old design, but it was aerodynamically excellent on December 22, 1945, and it remains so today. □

Beechcraft Bonanza A36

Base price: \$235,400

Specifications

Powerplant	Continental IO-550-B, 300 hp
Recommended TBO	1,700 hr
Propeller	three blade, 80-in dia
Length	27.5 ft
Height	8.6 ft
Wingspan	33.5 ft
Wing area	181.8 sq ft
Wing loading	20.2 lb/sq ft
Power loading	12.2 lb/hp
Seats	6
Cabin length	12.6 ft
Cabin width	3.5 ft
Cabin height	4.2 ft
Empty weight	2,266 lb
Empty weight, as tested	2,470 lb
Max ramp weight	3,663 lb
Max takeoff weight	3,650 lb
Useful load, as tested	1,193 lb
Max landing weight	3,650 lb
Fuel capacity, std	74 gal usable
	444 lb usable
Oil capacity	12 qt
Baggage capacity, total, aft cabin and extended rear compartment	470 lb, 47 cu ft
Performance	
Takeoff distance, ground roll	1,182 ft
Takeoff distance over 50-ft obstacle	2,100 ft

Max demonstrated crosswind component	17 kt
Rate of climb, sea level	1,208 fpm
Max level speed, sea level	184 kt
Cruise speed/range w/45-min rsv, std fuel (fuel consumption)	
@ max cruise, best power	176 kt/594 nm
6,000 ft	(101.8 pph/17 gph)
@ economy cruise	143 kt/902 nm
10,000 ft	(58.5 pph/9.3 gph)
Service ceiling	18,500 ft
Landing distance over 50-ft obstacle	1,450 ft
Landing distance, ground roll	920 ft

Limiting and Recommended Airspeeds

Vx (best angle of climb)	84 KIAS
Vy (best rate of climb)	100 KIAS
Va (design maneuvering)	141 KIAS
Vfe (max flap extended)	124 KIAS
Vle (max gear extended)	154 KIAS
Vlo (max gear operating)	
Extend	154 KIAS
Retract	154 KIAS
Vno (max structural cruising)	167 KIAS
Vne (never exceed)	205 KIAS
Vr (rotation)	72 KIAS
Vs1 (stall, clean)	68 KIAS
Vso (stall, in landing configuration)	59 KIAS

All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted. □