



# *Beech Bonanza*

Celebrating 60 years of continuous production, and still going strong.  
by Mike Potts

**T**he Beech Bonanza: In many ways it was the “VLJ” of its time. When it debuted in 1947 it represented a huge technological advance in private aircraft – an all-metal, low wing, retractable gear airplane that was nearly as fast as an airliner and available at a very affordable price – just \$7,950 for the first ones.

And now, in 2007, the Beech Bonanza turns 60. That’s right, 60 years old, and incredibly, the Bonanza has been in continuous production for all that time. Sixty years of good times, hard times, peace times, war times, boom times, recessions, and about every other kind of times there could be. No other airplane comes even close to this production milestone.

Moreover, the Bonanza’s continuous production run shows no sign of stopping. With 80 Bonanzas delivered last year, and 15 more in the first quarter of this year, demand for

the product clearly continues to be strong.

The Bonanza has even outlasted the companies that built it. The Beech Aircraft Corporation that designed and developed the Bonanza gave way to Raytheon Aircraft in 1994. And now Raytheon is gone and the name on the building is Hawker Beechcraft, a change that happened just about the time the Bonanza was starting its 61st year of continuous production earlier this year. Hawker Beechcraft says it plans to continue building them, so it’s not inconceivable that the Bonanza could have a 65th birthday, and perhaps even a 70th.

The name on the building may be different, but some aspects of the Bonanza remain unchanged since the first delivery. When Walter Beech first put the Bonanza into production, he made a decision to invest in hard tooling that would support a long production run. This strategy was successful beyond all expectation. If you take a walk through

the old Beechcraft Plant II at the corner of Kellogg Avenue and Webb Road in Wichita, Kansas, where Bonanzas are built today, you’ll see tooling with quality inspection stamps dating back to 1947. Some of the same tooling that was used on the first Bonanzas is still in use today!

## **VLJ HYPE – Déjà vu**

Like some of the VLJs that are coming into the market today, the Bonanza was the subject of considerable media coverage prior to its first delivery. World War II had just ended when the Bonanza was announced, and newspapers and magazines were full of stories speculating on a future that might see an airplane in every garage. It wasn’t hard for even the non-aviation journalists to see the Bonanza represented an enormous upgrade over the tube-and-fabric Piper Cub-like airplanes that had been the primary fare for pre-war private aviators.



THEN AND NOW: A 1946 EXPERIMENTAL V-TAIL BONANZA (ABOVE), AND TODAY'S 60TH ANNIVERSARY EDITION (RIGHT)



Like the VLJs of today, clearly the Bonanza represented a substantial step beyond what had previously been available. As a result, Beech took orders for more than 500 Bonanzas long before the airplane achieved FAA certification. Does any of this sound familiar?

Unlike today's VLJs, however, Beech began delivering Bonanzas very rapidly and almost immediately after certification was obtained on March 25, 1947. The factory had started building airplanes well in advance, so customers wouldn't have to wait too long. With its solid order backlog, Beech managed to deliver an incredible 1,061 Bonanzas in the final nine months of 1947, and another 678 in 1948.

An early study had suggested there might be a market for 2,000 to 4,000 Bonanza-class airplanes per year – an interesting parallel with the VLJ market that today is forecasting deliveries at similar levels once full produc-

tion gets underway, and the emerging air taxi market spurs demand.

Whether such a market for VLJs will develop still remains to be seen, but what is known is that in 1947 such a market never did develop. Instead, the trend went the other way. With initial demand apparently sated and a post-war recession putting a significant damper on the private airplane market, Bonanza deliveries dropped off dramatically after 1948.

After its initial surge, the Bonanza market

settled into an average pace of about 300 to 400 units a year – a rate that remained quite consistent for the next four decades, varying mostly with the ebb and flow of the general economy. In a half-dozen good years, sales topped 500 units. In about as many lean years, delivery totals were closer to 200 units. Over the last 20 years, Bonanza deliveries have averaged closer to 100 units per year.

Make no mistake – these are very good numbers. Throughout most of its history the folks at Beech/Raytheon have been delighted >

with the Bonanza's sales performance – but clearly there was never a market for the 2,000 to 4,000 airplanes a year that was predicted in 1946.

Once again drawing likenesses from the emerging VLJs of today, the price for the new Bonanza did not stay at its introductory level for very long. The first price increase came at the beginning of 1948, a 12-percent jump to \$8,945. That first increase took effect with Serial Number 974, before the initial production run of 1,500 airplanes was complete. By 1950 the price was up to \$11,950.

Today the base price of a new Bonanza is \$574,000. Any attempt to compare today's price with sixty years ago, however, is largely meaningless. That's because the Bonanza has evolved significantly over the past six decades. Today's airplane is faster, with a much bigger engine, and carries more people. It is equipped with a sophisticated avionics suite with capabilities beyond what pilots could even dream about in a single-engine piston airplane even as little as 20 years ago. They may be made on some of the same tools, but today's Bonanza is a much more capable piece of equipment than the airplane that debuted in 1947.

Also like the VLJs, many of the early Bonanzas found their way into the air taxi market. An early regional airline, Central Airlines of Fort Worth, Texas, operated a fleet of 11 A35 Bonanzas (the 1949 model) in a four-state region that served 25 cities. Many Bonanzas flew in charter operations from FBOs all over the United States, and, in fact, all around the world.

One of the most ignominious moments in Bonanza history came on February 3, 1959 when a Bonanza being operated as an air taxi, and flown by an inexperienced pilot, went out of control and crashed shortly after takeoff from Clear Lake, Iowa, killing its three passengers - music legends Buddy Holly, Richie Valens and J.P. Richardson, otherwise known as the Big Bopper.

## ONE AIRPLANE, HUGE LEGACY

For all of its longevity, perhaps the most remarkable thing about the Bonanza is the number of follow-on airplane designs that grew out of it. The Bonanza can legitimately claim fatherhood to some very significant airplane designs.

Just three years after the Bonanza's debut, Beech introduced the Twin Bonanza. Oddly, the Twin Bonanza was not created by the relatively simple process of adding a second engine to the basic Bonanza airframe. That would come later. Instead, Beech created the Twin Bonanza by the significantly more complex process of widening the Bonanza fuselage by 11 inches and adding a



TODAY'S BONANZA OFFERS A COMFORTABLE INTERIOR AND GLASS COCKPIT



third seat in the middle.

Structurally, Beech gave the Twin Bonanza a new center section to support the spar assembly, landing gear and twin engines. The Bonanza's wings became the Twin Bonanza's outboard wing panels, outside of the nacelles. The result was a much bigger airplane.

Out of this Twin Bonanza design grew first the Beech Queen Air, and then the King Air – the most successful airplane in the history of business aviation, with more than 6,000 units delivered. The Beech 99 and Beech 1900 airliners that played such a pivotal role in developing the regional airline industry in the United States and elsewhere in the world in the late 1960s, 70s and 80s also grew directly out the King Air/Bonanza design lineage.

Beech finally got around to the seemingly obvious idea of just putting two engines on the basic Bonanza airframe in 1956, when the original Bonanza design was nine years old. The new airplane was named the Model 95 Travel Air – an airplane that enjoyed limited success. Five years later, however, in 1961, Beech put larger engines on the Travel Air and created the Beech Baron – one of the most successful piston twins ever designed, and one of the few still in production.

In 1950 Beech altered the Bonanza design to create a prototype military trainer with tandem seating and a full glass canopy, designating it the YT-34. Three years later Beech sold this design to the U.S. Air Force as the T-34 Mentor. Soon after, the U.S. Navy also bought the Bonanza-based T-34.

In the early 1970s Beech upgraded the basic T-34 with a Pratt & Whitney turbine engine, designating it the T-34C. The U.S.

Navy selected the T-34C as its primary trainer – airplanes it began replacing only recently. So for nearly 50 years virtually all U.S. Navy pilots trained in aircraft that evolved from the basic Beech Bonanza design.

In addition to U.S. military pilots, Bonanza-based airplanes have trained the airmen of Canada, Japan, Argentina, the Philippines, Ecuador, Peru, Morocco, Indonesia, Taiwan and others.

Bonanza-based airplanes have also served the U.S. military in transport, utility and special mission roles, including versions of the King Air, Queen Air, Twin Bonanza, Beech 1900 and the Baron. There were even a few special electronic surveillance versions of the Bonanza itself used by the U.S. Air Force during the Vietnam War, including one designed to be flown by remote control.

So you can see that, in addition to its own success story, the Bonanza has formed the basis of some of the most significant airplanes in business aviation history, as well as a host of highly successful military transport and trainer models. That's quite a legacy to grow from a single basic design.

### LOOKING AHEAD...

And still the Bonanza continues, setting a new production record with every passing day. At age 60 it continues to hold its value and its place in the market very well. In the past year, Raytheon updated the Bonanza once again with a new Garmin 1000 avionics system, bringing the airplane into the 21st century. It is still one of the most desired single-engine piston-powered airplanes in the world.

So what are the chances the Bonanza will reach its 70th birthday, or perhaps even 75

years of continuous production? Based on the market today, I would have to rate the chances as fairly good. Market demand continues to be strong, and it seems very likely the Bonanza will equal the 80 deliveries it recorded last year.

As long as the market holds up, 80 units a year should be enough to keep the new investors at Hawker Beechcraft interested. The biggest risk to continued Bonanza longevity would appear to lie in the airplane itself. The Bonanza is an all-metal airplane that is fairly labor intensive to build. Based on the current level of technology, re-designing the Bonanza to get the labor cost out of it would likely be prohibitively expensive.

So the Bonanza will probably have to survive in the market pretty much as it is today. And so far, that's just fine. The airplane has beautiful flight qualities and offers good performance for the money. Right now, there's no really directly competitive product that seriously challenges the Bonanza. That could change quickly however, particularly with the proliferation of new airplane companies coming out with modern designs on a regular basis.

There's also the risk that a market downturn could drop Bonanza sales below the level that Hawker Beechcraft's new owners would consider viable. With the market looking strong for the foreseeable future, however, and no obvious direct competitor on the market, the Bonanza's position seems secure, at least for now.

I expect that when the year 2012 rolls around, Hawker Beechcraft will still be building Beech Bonanzas.

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