PILOT FLIGHT CHECK: The Beechcraft BARON B55

by DON DOWNIE / AOPA 188441

Moderate fuel consumption and a 200+ mph cruise account for the Baron's continuing popularity since its introduction in 1961

■■ There wasn't a cloud in the sky from Wichita all the way to the West Coast, winds were negligible, and I was in the driver's seat of a brand-new 1975 Beechcraft Baron B55 on my way to Los Angeles.

It was one of those days when it was almost sinful to be flying alone. Somebody else—up to five other "somebodies"—should have been sharing the beauties of a fine trip west in this speedster: sharing the new-plane smell and the glistening reflections of fresh paint, the unscuffed windshields, and a full-house panel of goodies that took me most of the afternoon to fully appreciate.

It had all begun with a phone call earlier in the day. I'd arrived in Wichita, delivered the plane I'd been ferrying, and made an airline reservation back to Los Angeles. Then I checked the local airplane factories just in case anyone needed a delivery going west. A few minutes later, Dave Cotten, assistant director of public relations for Beech Aircraft Corp., called back and asked if I'd mind bringing out a new Baron for Mike Gordon at Beech West in Van Nuys, Calif.

Mind—I was delighted!

Twenty minutes later, when Dave drove up, my bags and I were outside the Ramada Inn waiting. At Beech's delivery center, I signed for the ship, canceled my airline reservation with

BEECHCRAFT BARON B55

Specifications

Engines	Two 260-hp Continental IO-471-L
Gross weight	5,100 lb
Dry empty weight (approx)	3,090 lb
Useful load (standard airplane)	2,010 lb
Fuel capacity	
Standard	106 gal usable
Optional	136 gal usable
Oil capacity	6 gal
Baggage	
Rear compartment	35 cu ft (400-lb capacity)
Front compartment	12 cu ft (300-lb capacity)
Optional extended rear comp't	10 cu ft (120-lb capacity)
Wing area	199.1 sq ft
Wing loading at gross	25.6 lb/sq ft
Power loading at gross	9.8 lb/hp
Wingspan	37 ft 10 in
Length	27 ft 0 in
Height	9 ft 7 in
Seating	4–6
Basic price	$89,000

Performance

Max speed, sea level	226 mph
Cruise speeds	
75% power at 7,000 ft	225 mph
65% power at 10,000 ft	220 mph
55% power at 12,000 ft	207 mph
Stall speed, gear & flaps down	84 mph
Takeoff run, sea level	1,340 ft
Over 50-ft obstacle	1,675 ft
Landing roll (30° flaps)	940 ft
Over 50-ft obstacle	1,840 ft
Rate of climb, sea level	
Two engines, gross wgt	1,670 fpm
Single engine, gross wgt	318 fpm
Single engine, 4,500 lb	526 fpm
Service ceiling	
Two engines, gross weight	19,700 ft
Single engine, gross wgt	7,000 ft
Single engine, 4,500 lb	11,900 ft
Range, 65% power at 10,000 ft, extended-range tanks	1,082 mi

glee, checked the weather, and filed VFR to Albuquerque.

Factory production test pilot Bob Buettgenbach walked out to the gleaming new Baron and gave me a personalized cockpit check. Our preflight disclosed that the right cowl flap wouldn't close, and we waited until after the lunch break so that two mechanics could check the linkage. That done, I was ready to fly.

With both the Baron's fans spinning comfortably, I taxied to the runup area, went through the printed checklist, turned on the nav/com equipment, waggled the controls for a second time, and taxied back to the takeoff area. Beech Tower gave the nod, and N8785R and I were off and running.

With one occupant, minimum baggage, and extended-range fuel tanks providing 136 gallons usable (142 total), the Baron's takeoff performance was spectacular. I had to come way back on the power, halfway through my first turn, to remain below the busy jet pattern at nearby McConnell AFB.

Once clear of the control zone, I opened my flight plan with Wichita Radio, re-scanned the engine instrument panel at the right of the cockpit, and started a cruise-climb, pulling 2,400 rpm and 24 inches of manifold pressure.

Winds were reported light and variable, and I leveled off at 8,500 feet. The right cowl flap still didn't close completely, but the gauges showed little or no difference in head temperatures, exhaust gas temperatures, or oil cooling, so I could see no valid reason to turn back.

I passed over Liberal, Kan., at 1:43 p.m. CST. With 2,300 rpm and 22 inches mp (63% power) and an outside air temperature of 45°F, my true airspeed was 205 mph. According to the fuel-flow meters, I was pulling 9 gph per engine.

The checkpoints went by rapidly: Guymon, Okla., at 1:58; Dalhart, Tex., at 2:20; Anton Chico, N.M., at 3:06. At 3:43 p.m., Eight Five Romeo and I eased down to a smooth but not-too-short landing at Albuquerque International—550 statute miles in 2 hours 50 minutes, including off-course turns at both takeoff and landing.

Cutter Flying Service pumped 88 gallons of fuel into the Baron's tanks, since I'd been running the new powerplants just a little on the rich side. Two of Cutter's mechanics took a look at the right cowl flaps and worked on them with only slightly better results than the factory mechanics had had.

The local FSS was reporting "severe clear," and I filed VFR on V-12 to Van Nuys. With an enroute time estimate of 3 hours 30 minutes, I had wheels up at 4:57 p.m. CST.

The forecast held, the winds were light, and I climbed to 10,500 feet to clear Lookout Mountain and El Morro National Monument, east of Zuni, N.M.

Having made deliveries of smaller, slower craft over this basic route for more than 25 years, I found it almost unreal to watch the well-known checkpoints pop up so quickly. At 10,500 feet (OAT 50°F), with 2,300 rpm and 21½ inches mp (that's full throttle), I was indicating 182 mph, which trued out at a whopping 220.

Westbound out of Albuquerque, I had an added navaid that I had enjoyed on other recent trips. Air carrier jet contrails strung out above and ahead of me, as the big birds and their passengers headed for California, making transient signposts in the technicolor of an early evening sky.

The Baron's Mitchell Century IV autopilot didn't stay on for long, since 85R was plain fun to hand-fly. The 260-hp Continentals purred contentedly, and the Hartzell prop governors held near-perfect "sync." Zuni slid tailward at 5:43 p.m.; Holbrook, Ariz., at 5:59. Flagstaff and Humphrey's Peak zapped past the right wing at 6:18; Prescott at 6:36; and Needles, Calif., at 7:09.

A Chamber of Commerce sunset was developing over the nose of the Baron as I checked in with Dagget at 7:44 p.m. Abeam Palmdale, I canceled VFR.

continued

Photos by the author.

A quick change of frequencies gave me the Van Nuys ATIS, which was calling for landing on Runway 16 Left. Inbound to Newhall Pass, I called the tower as the big-city lights began to twinkle brightly in the dusk.

Both landing lights came on as I entered the busy San Fernando Valley and slowed to 175 mph (emergency wheels-down speed is 200 mph). As the gear came down, I made a careful review of the prelanding checklist.

"Van Nuys Tower, Baron Eight Five Romeo abeam west with a light."

"Roger, Eight Five Romeo. Follow the trainer turning final. Cleared to land 16 Left."

The tires yelped briefly and the nose gear touched down at 8:17 p.m. CST—an even 3 hours 20 minutes from Albuquerque, including 180-degree turns at both ends of the trip.

When the tanks were filled the next day, 85R took 91 gallons, so I was still running on the rich side. An adjustment of the fuel-flow meters might have been in line, since in-flight photos showed the meters indicating 8–9 gph per engine.

When I chopped the mixture in front of Beech West and looked at the deepening sunset, I couldn't suppress a smile. I was an hour and a half ahead of the scheduled airliner I'd canceled after lunch.

On a clear-day cross-country with an ETA at dark, you just don't explore the slow-flight and single-engine characteristics of any brand-new airplane. At least, I don't. Thus, a few days later, Beech West pilot Dick Babbitt and I climbed back aboard 85R to take a look at the slow-speed end of the spectrum.

The dual control yoke had been removed and a standard throwover wheel installed. The small flap handle hides behind this yoke and is a bit difficult to find on first effort. There is no preselect on the flap switch, so you must search for the small flap indicator at the left of the console. The flaps extend aft during the first 10 degrees of motion and add some additional wing area for slow-speed control.

I questioned Babbitt about the standard door latch, which had no "idiot light" to warn a careless pilot should his cabin door not be secure. Babbitt told me there has been an annunciator light on the door of the larger Model 58 Baron since 1970. (This door warning light is also standard on the A36 Bonanza.)

There's really only one set of controls that's ever given me a moment's question on any of Beech's post–World War II twins. Beech is the only twin manufacturer I know of that installs the power levers with the props on the left of the console and the throttles in the middle. (Mixture controls are standard, to the far right of the console.) Frankly, during my delivery flight west and, later, during the slow-flight exercise,


BARON

I didn't touch a single lever on the B55 console without taking a second look to be doubly sure I had the control I wanted.

"Just remember to 'reach for a gauge,'" said Babbitt, and this approach does the job very well as you survey the Baron's instrument panel. The dual tachometer is on the left, directly above the prop controls; the dual manifold pressure gauge is directly above the center-mounted throttles; and the dual fuel-flow gauge is directly above the mixture controls.

There are a number of niceties about the B55 not found in some other twins. You have three trim tabs, for rudder, elevator, and aileron. The cowl flaps operate in a people-engineered manner whereby pushing down on the two controls below the throttle quadrant pushes the cowl flaps open. Fuel management is completely straightforward, with a simple "on," "off," and crossfeed selector arrangement located between the pilots' seats just forward of the spar. A spring-loaded Plexiglas cover over these selectors might make them even more goofproof.

Weather during our slow-speed evaluation differed a bit from the very-VFR afternoon delivery. After takeoff, Burbank Departure Control vectored us IFR to blue skies above 7,000 feet.

The B55 makes a solid, straightforward instrument platform, all three flight controls requiring an equal amount of pressure. With our light weight (full tanks and two people), our rate of climb approached 2,000 fpm with 2,500 rpm and 25 inches mp.

We headed north toward the Mojave Desert and VFR weather for a series of straight-ahead and turning stalls, both "clean" and "dirty." There's ample lead-time with the stall warner, a steady tone on a loud horn. Add the intermittent "gear-up" audio, when the throttles are retarded below 13 inches, and the cockpit can sound like a barnyard at sunrise.

With partial power—15 inches, to keep the gear horn quiet, and 2,400 rpm—85R was below 60 mph indicated before it shuddered and stalled. Recovery was standard, with power, top rudder, and enough aileron to assist in rolling level. With a minimum-loss-of-altitude recovery, the stall warner reminded you promptly of any incipient secondary stall.

At 7,000 feet, we simulated an engine failure on takeoff. (With gear down, Vmc is 92 mph at full gross.) I asked Babbitt to pull a throttle and deliberately didn't watch which engine was chopped. The Baron yawed to the left and started to duck its wing slightly. Partial right rudder kept the nose in line, and partial right aileron put the wings level. (Remember, though, that at 7,000 feet, the unturbocharged engine was putting out only 73% of its 260 hp, so the same situation, at full gross at sea level, would undoubtedly require all the control movement available.)

Babbitt demonstrated single-engine characteristics as we shut down the left engine. Demonstration feathering procedure calls for 14 inches of manifold pressure, prop control back to the detent, mixture to idle cutoff, and prop to "feather." The Baron's single-engine ceiling, at full gross weight of 5,100 pounds, is 7,000 feet; at 4,500 pounds it goes up to 11,900 feet.

Steep turns into the dead engine are strictly no-sweat. With rudder and aileron trim adjusted, 85R flew hands-off with the left engine stopped.

Unfeathering calls for more than 120 mph to start the prop windmilling, or for a tweak on the starter. Since 85R had brand-new engines, we dropped the nose, increasing our airspeed to above 130 mph, and the prop began to turn slowly. Once the prop is windmilling, the prop control goes forward to 900 rpm and back to the detent. Mixture goes forward, and the prop controls (the levers at the far left) are matched. As the engine warms up, the throttle goes forward and you're back in business.

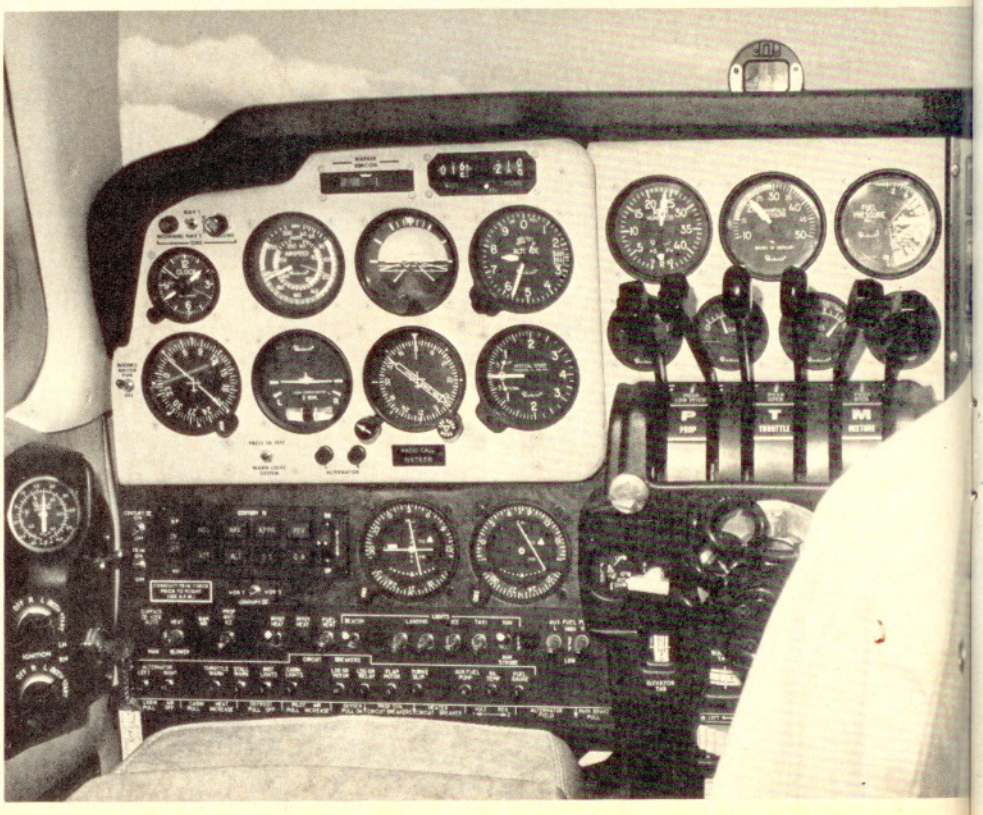
There's a thumb switch for elevator trim on the left of the throwover wheel. It's necessary to push down on this switch to disengage the autopilot before flicking the switch fore or aft for trim.

We shot a landing at Fox Field (Lancaster, Calif.), where 85R behaved like a well-mannered flying machine. Then it was back into the blue, with a rapid climb over undulating cloud cover before we received an IFR vector to Van Nuys along the Burbank ILS. All the black boxes worked as programmed, and we eased off the high-speed turnoff at Van Nuys.

It's easy to understand why the Baron has been Beech's most popular twin. Factory production records show that its parent, the Travel Air, was first introduced in 1958, 721 being built. The Baron came out in 1961 and, as of November 1974, more than 3,400 of the aircraft's various versions (B55s, E55s, 58s, and 56TCs) had been built.

The B55 Baron's base price of $89,000 includes two pages of standard equipment items, including a King KX-170B nav/com system and an ELT. But N8785R was loaded with goodies, and the invoice was $120,670, including a $19,665 IFR avionics and autopilot package, extended baggage compartment, extended-range tanks, large cargo doors, fifth and sixth seats, three-blade props, propeller anti-icing equipment, and internally lighted instruments.

Beech's promotional material for the Baron claims that an aggressive businessman pilot can probably put himself into a B55 "for about $225 per month net capital cost." Be that as it may, the businessman pilot who finally gets N8785R will have a beautiful, spirited, functional package of fast transportation. □



B55 panel in flight. Prop, throttle, and mixture controls are located below the appropriate gauges.