

Formation Considerations For Barons

Speeds and Configurations

- * The Barons will have Blue Lines at about 100 knots, so they need to stay above that at all times, unless flaps down and committed to land.
- * Climb speed with Barons in the formation needs to be at least 110 knots, which gives a bit of margin over Blue Line.
- * Cruise speed should be 130 knots or more if possible. This is needed to keep a reasonable speed margin over Blue Line for the Baron wingman on the inside of turns.
- * For landing, pattern speed of 110 knots, with 100 knots being good on final with the flaps down. Over the fence at 90 knots with full flaps, no maneuvering and committed to land is OK for most Baron pilots, but most likely not for heavier 58s or for P-Barons.

If the Barons are flying with a Bo lead,

- * The Barons should plan to use flaps for landing, even if the Bo does not. The Bo's need to keep the speed up. Lighter, early model Bo's may need to keep their flaps up.
- * Takeoffs are conventional, but the Barons will not be able to leave the ground on takeoff until at least 90 knots, and it's tough to keep the Bo on the ground at that high a speed. So, the Bo lead should feel free to get off the ground, fly level a bit, get the speed up to 110 as soon as feasible, and expect that the Baron will come off the ground later than the Bo. I've found that using 10 degrees of flaps improves the Baron's takeoff profile with a Bo lead, making performance more equivalent, and more comfortable while we get the speed up.
- * The Barons need to get the gear up immediately after takeoff, even if the Bo lead is not gear up, and they need to be careful not to shoot acute when they do so. It can be uncomfortable to reduce power to stay in position at lift-off speed that close to the ground. That's another reason the Baron's flaps are down 10 degrees.
- * The differences in wing loading and inertia between the Bo and Baron will be apparent to the Baron pilot. In rough air, the two airframes move at different rates, making it tougher to stay in position. Again, it's best to have the heaviest possible Bo lead the Barons, and to keep the Baron's fuel load light. The Bo's will accelerate quicker and slow down quicker, so the Barons need bigger power changes than a Bo. The worst condition is to have a very light early model Bo lead the Barons on a bumpy day. That could be frustrating or demoralizing to the new Baron formation pilot if they don't know what to expect - "Why can everybody but me stay in position?"

Formation Position References

The window post references work fine when lining up on a Baron, just like a Bo.

The aileron/flap gap and engine cowling corner points don't work on a Baron, There is a seam on the Baron's nose in the same place as the engine cowling on the Bo, but it's blocked from view by the Baron's near-side engine nacelle.

If the Baron has the wide-cord flaps, the tapered outboard aft corner lines up with the front edge of the cabin door on the right side of the aircraft. The vertical point on the door edge is about four inches down from the top door hinge. No such luck on the left side, of course.

I just use the window posts, with the outer half of lead's far side wing visible for vertical.

That's all I can think of right now.

Regards,

Richard Schmidt