

FFI Formation Guidelines and Standard Procedures
Bonanza Supplement, Version 7
07/20/2019

This document highlights formation flight differences between RV and Bonanza/Baron aircraft. In conjunction with “*FFI Guidelines and Standard Procedures*”, this Supplement establishes “**Bonanza Standard**”. Procedures contained in these two documents need not be briefed, but Flight Leads always have the option to brief alternate procedures and airspeeds if required (example: heavier Barons or 225 horsepower aircraft).

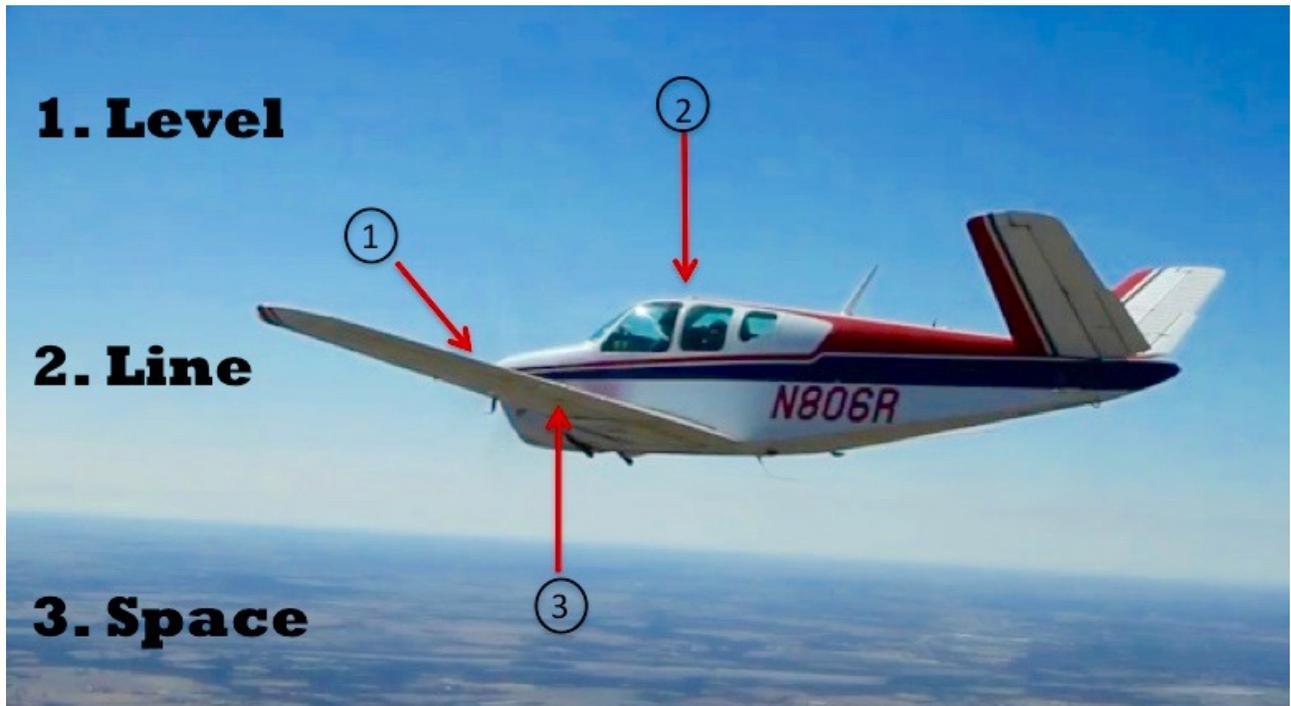
Element Takeoff: For elements of matched horsepower (HP), Lead will give the Wingman **3”** of manifold pressure (**MP**). More or less MP should be briefed for aircraft of differing HP.

Rotation Speed: **70-80 KIAS** (**90 KIAS** for Barons)

Climb-out: **100 KIAS** (**110 KIAS** for Barons) and **500 FPM** until all aircraft have rejoined.

Rejoin: Lead will use **20-25 degrees of bank** for all turning rejoins.

Bonanza Fingertip References:

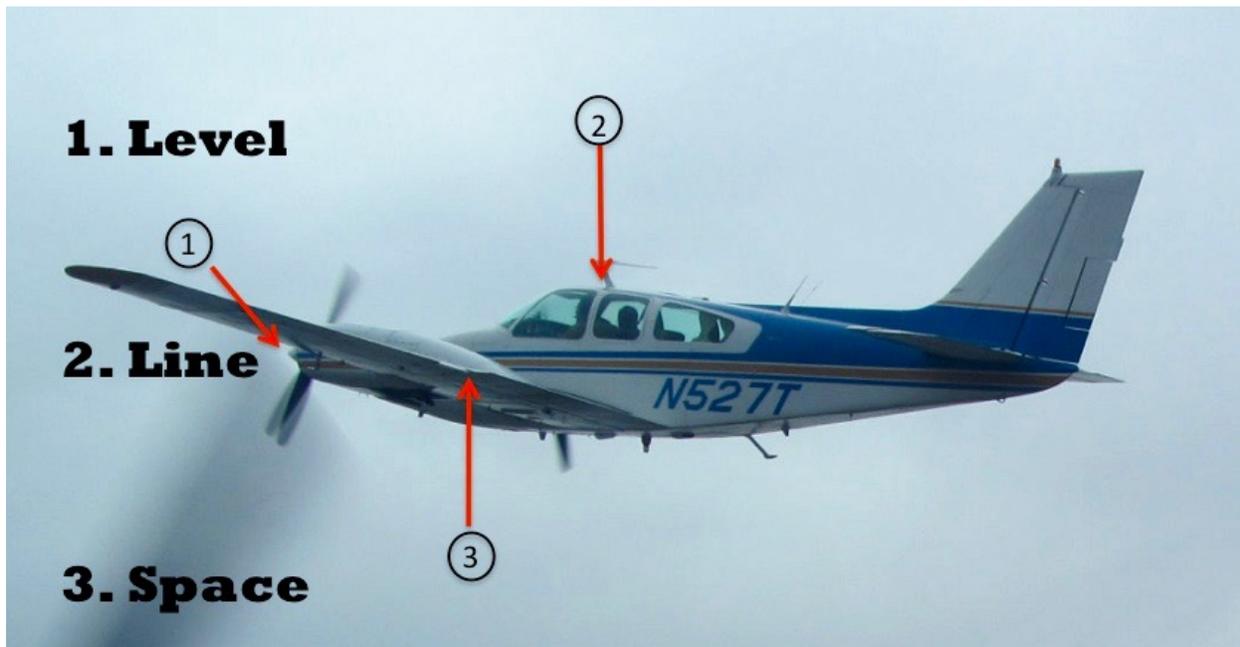


1. **Level:** Hide Lead’s prop spinner with wing

2. **45 degree Bearing Line:** Lead’s window posts aligned

3. **Spacing:** Aft edge of flap/aileron gap aligned with lower aft corner of engine cowl

Baron Fingertip References:



1. **Level:** Lead's prop spinner visible under the wing
2. **45 degree Bearing Line:** Lead's window posts aligned
3. **Spacing:** Aft edge of flap/aileron gap aligned with baggage door line

Echelon Turn Vertical Reference: Keep the bottom of the fuselage of the preceding aircraft on the horizon.

Cruise Speed: 130 KIAS

Maximum Speed: 160 KIAS

Pitchout / Break Angle: 45 Degrees

Pattern Speeds: Downwind – **110 KIAS**, Base – **100 KIAS**, Final – **90 KIAS**

Lower gear abeam the numbers. Lower flaps (as briefed) when turning base.

Landing: For landing from the overhead pattern, Bonanza Standard is to land and roll out using the **Hot - Cold** option. Due to the larger wingspans of Bonanza and Baron aircraft, the **Centerline - Cold** option is discouraged. Lead has the option to brief the **Staggered** option if desired.

Lazy Eight Maneuvering: (Fingertip / Diamond / Close Trail) Lead should work the formation up to **30 degrees of bank and +20 degrees of pitch.**

Extended Trail Entry: From Echelon Formation only, followed by a normal pitchout with two second spacing and 45 degrees of bank. Lead will not continue the turn, but will roll out after 180 degrees to wait for the "4's In" call. With visual on all preceding aircraft and appropriate spacing, 4 may call "In" prior to rolling out in trail.

Extended Trail Maneuvering: Lead should work the formation up to **45 degrees of bank and +30 degrees of pitch**. To prevent Wingman overspeed, Lead should avoid excessive nose low maneuvering and adhere to the 160 KIAS limit.

Close Trail Spacing: **One ship length** between aircraft, with adequate stack down in case of engine failure of the preceding aircraft.