

**FFI Formation Guidelines and Standard Procedures**  
**Bonanza Supplement, Version 5**  
**03/09/2018**

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).

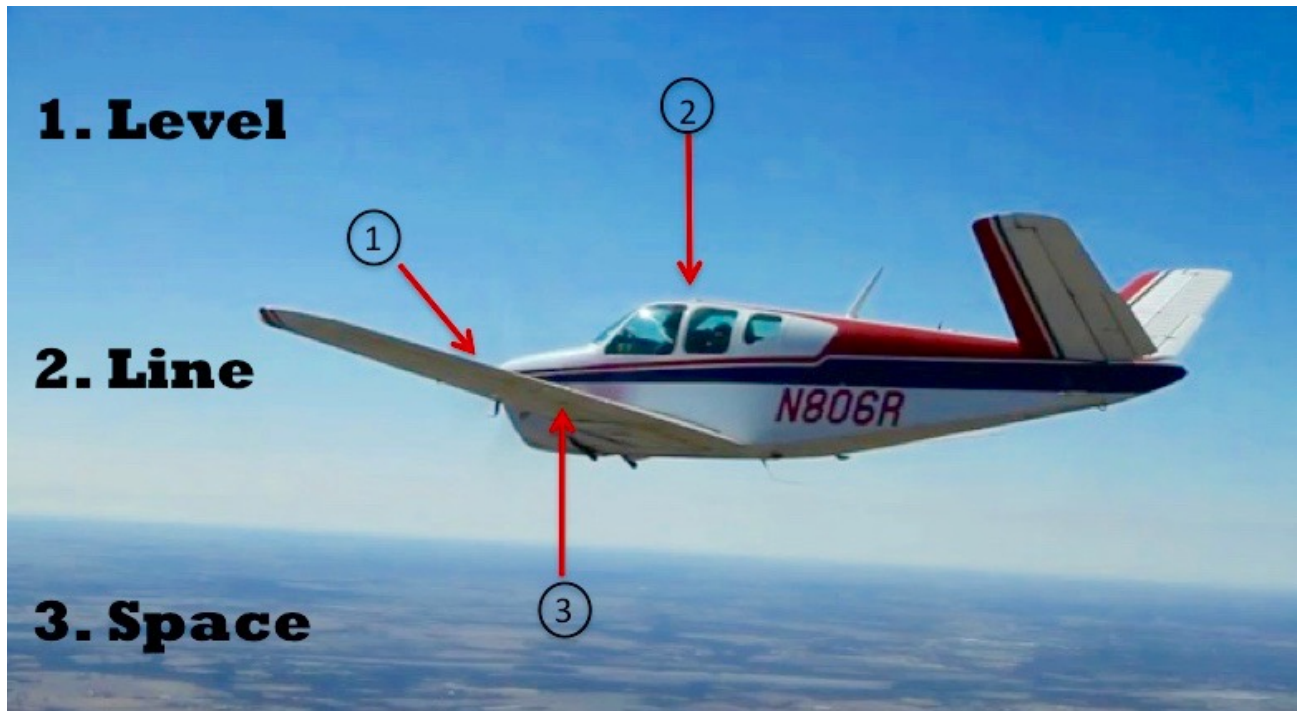
**Element Takeoff:** For elements of matched horsepower (HP), Lead will give the Wingman **3”** of manifold pressure (**MP**). More or less MP should be briefed for aircraft of differing HP.

**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 rejoins.

**Bonanza Fingertip References:**

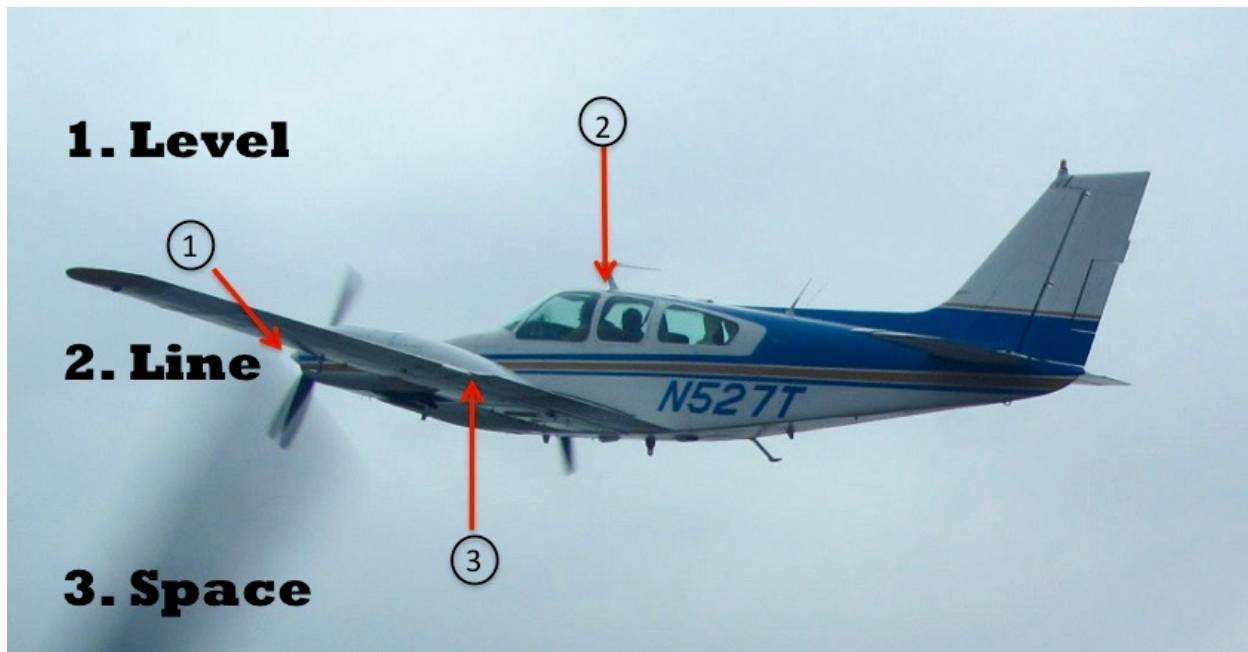


1. **Level:** Hide Lead’s prop spinner with wing

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.

**Reform to Fingertip from Close Trail:** Lead can reform the flight with either a turning or a straight-ahead rejoin. For a turning rejoin, number two will rejoin to the inside of the turn, and 3 and 4 will rejoin to the outside. For a straight and level rejoin, each wingman will rejoin to the side he was on before the reposition to Close Trail.

**Cruise Speed: 130 KIAS**

**Maximum Speed: 160 KIAS**

**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.

**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.