

## **Bonanzas to Oshkosh XXX Element Leader Pre-Briefing**

Congratulations!

You have been selected to fly this year's Bonanzas to Oshkosh as an Element Leader. You were singled out based on your formation skills, maturity, and judgment. Thanks for making B2OSH safer, more standardized, and more fun.

As I'm sure you know by now, we've changed our flight procedures this year. Please read the [B2OSH Formation Flight Plan](#) on the website under the "Flight" tab if you haven't already. The biggest change is the division of the large single B2OSH flight into four smaller mini-B2OSH flights—A, B, C, and Baron. Each of these flights will take a full two minutes of spacing for takeoff, and will operate semi-autonomously during the flight. Weather deviations, altitude selection, and even diversion to an alternate airport will all be handled by each of the Flight Leaders. Instead of naming each Element by a number, the elements will be named by Flight and Element number. (B3, C5, Baron 2, etc).

When you taxi in at Rockford, please put a RED card in your window to tell the line crew you are an Element Leader. If you are also a Row Leader, please put a black "X" on the red card). If you are one of the four Flight Leaders, display a WHITE card with your last name on it. Flight and Row Leaders will be parked on specific spots in the parking area. Other Element Leaders will park on any available red spot. If all red spots are occupied by the time you arrive, enjoy this B2OSH as a Wingman again!

### **Briefing**

Our Flight Briefing will be conducted in 3 stages:

The Main Briefing is required for ALL pilots, and will be in the RFD auditorium, starting at 1000. B2OSH Lead will conduct the briefing, and will focus on weather conditions, field conditions, runways in use at RFD and OSH, and a review of the briefing material handouts. He will run through a quick overview of the route and procedures, but this will not be a long briefing covering every detail. All pilots are expected to have studied these details before arriving at RFD. There will be NO questions taken during or immediately after the Main Briefing. Pilots can ask questions of their Row or Element Leaders on the ramp.

Row Briefings of 12 elements/36 pilots will take place at the Row Leader's airplane on the ramp immediately following the Main Briefing. These briefings will include walk-throughs of the basic flight and the Alternate Runway Landing Procedure.

Element Briefings will commence right after the Row Briefings. Focus on matching aircraft performance in the take-off and landing regimes. Discuss planned liftoff speed. Decide who flies Left and Right Wingman positions. Review run-up, brake release, gear, flap, and cross-under signals. Agree with your Left Wingman on flap use for landing.

Your job as an Element Leader is manifold, but the major points are to fly smoothly so your wingmen can easily follow, and to **HIT YOUR NUMBERS!** To fly smoothly, you need to anticipate changes and notice them early, so the corrections can be small and subtle. That's a very difficult job when your cues are in an element half a mile directly ahead of you. That's why it is so important to hit the numbers.

## **What are the numbers?**

1. **15 second take-off interval.** A flagman with a stopwatch will wave you off. Only 5 Leaders will make "Rolling" calls this year (A, B, C, Baron, Bonanza Tail).

1a. Flight Leaders will be flagged off after a two minute interval.

2. After lift-off and gear up, set power for **100 knots indicated and 500 feet per minute climb.** Know the power setting that yields 100/500.

3. **Cruise altitude is 3000' MSL.** Ceiling may dictate 2500' MSL cruise altitude. After level off, there should be 15 seconds between elements. That's roughly 3000'.

4. **Cruise at 130 KIAS.** Know the power setting that yields 130 KIAS in your aircraft.

When confronted with up or down drafts, please leave throttle alone. Maintain altitude and accept airspeed excursions or smooth out the excursions by accepting half the rise or fall. If you are falling behind, make a small power increase and be patient. Do not change airspeed by more than 5 knots (135). If you're getting too close, decrease power just enough to slow to 125. If a small throttle decrease & patience aren't enough, gently slide to one side or the other. You are following the elements ahead, but be aware of the planned ground track-the Magenta Line-and anticipate what would be the best direction to move. When appropriate, nudge the formation back toward the line. Everyone behind you expects the element ahead to be on course. Staying on or near it is part of "fly the brief". To assist with flight situational awareness, the 4 Flight Leaders will announce their position and groundspeed over Janesville, FEZTY, and SOTTE.

5. All waypoints on the route are Fly By waypoints. They are not Fly Over waypoints.

6. On each Flight Leader's order on the flight frequency, each flight will **slow simultaneously to 110 KIAS.** Know the power setting for 110.

7. **Cross POBER at 3000' MSL.** Turn final at POBER. Do NOT overshoot. What if the preceding element slows early and you find yourself too close? Fly over POBER, turn inbound, clear traffic, and go around with your whole element.

8. After finishing the turn at POBER, slow to the **approach speed of 100 KIAS.** Call "ELEMENT XX GEAR DOWN, LIGHTS ON" on the flight frequency. Visually check that your wingmen's wheels are down. Don't forget your own gear & lights.

Know the power setting that will yield **100 KIAS and roughly 600 FPM** down with gear down.

9. Aim for the **Purple Dot**. Look at the airport diagram on the NOTAM. Aiming for the **Purple Dot** will require a slightly steeper than normal approach. If you go for the numbers, your wingmen and the Element Leader behind you will rat you out. Be aware of the guy behind as much as the guy in front of you.

Those are your numbers. Hit your numbers the best you can, **but please understand that formation flying is a VISUAL exercise. The numbers are tools to supplement what you SEE out the window.** The goal is a little over 3000 foot in trail spacing en route.

### **Element Spacing**

We want to land with 15 second intervals, the same as the take-off interval. After take-off and climb-out, we will have approximately 3000' spacing. If we hit our numbers, the only speed changes will be to maintain spacing, not to radically change it. As we slow to approach, that 15 seconds becomes less distance between elements, so as the element ahead of you touches down, you will be closing to about 1500' - perfect! The guy ahead will be slowing on the runway; 1500' will close to about 1200' when you touch down. Again, perfect. At 3000' separation, the wake turbulence is less if (when) you happen to catch it. Fly closer **ONLY** to maintain visual contact with the preceding element.

If you think you are a little behind, that is OK, as long as you can see a couple elements ahead. We are NOT trying to catch up! Anything above 130 knots will be to keep from falling behind.

If you see the element ahead move to one side, do one of 2 things, depending on your spacing. If nicely spaced or a little close, follow him. If you are a bit farther back than 15 seconds (3000'), continue straight ahead and take advantage of cut-off.

The POBER snake: We are going charm that poisonous viper again this year with our nearly straight route and the simple altitude profile. The route is shown on the B2OSH web site. We're going at 3000 MSL all the way to POBER.

The other tool is the go around. Where accordion effect tightens up spacing, an element going around inserts extra space for succeeding elements.

### **Objective Go-Around Criteria**

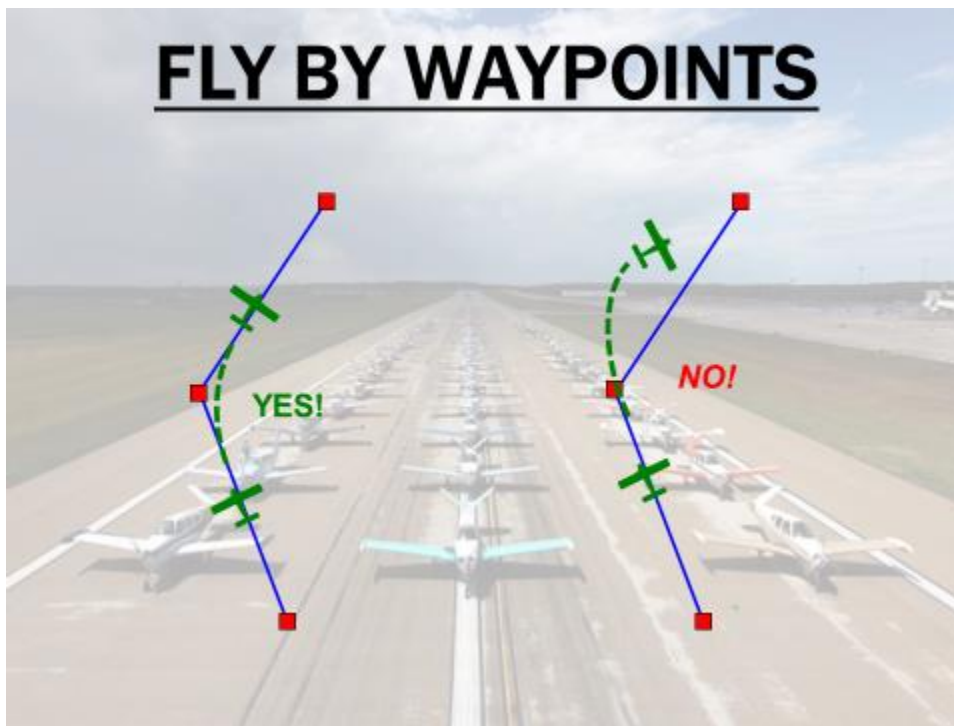
Adhere to these, in addition to the subjective criterion "I think we're too close":

1. If a snake has started before you reach POBER: maintain 3000, turn inbound, and go around when clear. Do not overshoot POBER.
2. If you need to S turn on final, DON'T. Clear traffic and go around.
3. If you have to slow below 90 knots to remain safely behind preceding element, then clear and go around.

4. If you have to approach shallower than briefed to keep previous element from going under your nose, then clear and go around.

**Please program the entire route, including a divert to KFLD.** If there is a runway abort or other delay during the take-off, you might be leading a flight of 100 or more - with zero visual contact with the elements ahead of you. Don't cut any corners and don't try to catch up. Lead the flight behind you. Fly the briefed route. Fly the briefed numbers. You know your element number – ask the preceding Element Leader where he is (distance from next waypoint), to get some SA for you and the flight you are leading.

Pay attention to the “magenta line” on your GPS and don’t wander off course. Be aware of Fond du Lac temporary Class D airspace. We will pass about 2 miles west of FLD Delta. FLD Class Delta is NOT charted. It’s not depicted on your GPS, because it’s only Class D for the show. Consult the NOTAM, know where it is, and don’t fly into it.



### **Fly By Waypoints**

Look at the graphic. It’s self-explanatory. Treat all B2OSH waypoints as Fly By waypoints.

We have simplified the routes to runways other than 36. Regardless of target runway at OSH, we will fly the same route to POBER. If 36, turn left for the runway, as we usually do.

If landing Runway 27, we will descend to 2000 MSL and slow to 100 KIAS, continue past POBER, and turn onto a wide left downwind 27. This turn is critical. We will

provide detailed instructions in the Main Briefing and walk through it in Row Briefings. On downwind, call Gear Down before turning base. Aim for the **ORANGE DOT**.

If landing Runway 18, we will begin descent to 2000 MSL and 100 KIAS, continue past POBER to parallel 36 onto a wide left downwind for 18 Right (can't land on 18L – no place to taxi off). Call Gear Down before turning base. Aim for the **PINK DOT**.

If landing Runway 9, same as above, but turn onto wide left downwind for 9. Aim for the **WHITE DOT**.

We will walk through these procedures in the Row Briefings on the ramp at RFD.

Prepare to insert 1 or 2 departure waypoints into the routes.

For a Runway 1 take-off we will go direct to KJVL. It's a straight shot.

For Runway 19 take-off, we'll climb straight out 5 miles to FANGU, then turn right to CUDUP, then turn right to KJVL.

For 07 departure, turn left at SUGEE.

For 25, insert ZEVBU then COTON. Two right turns to KJVL.

### **Do NOT use any frequencies other than those assigned!**

Please! No “element frequencies”! If there is a problem, we need to hear you.

### **Take care of your wingmen starting from the time you meet them.**

Interview them upon arrival. Know their names. Get a sense of their ability and experience, and decide who will fly on the left & right sides. If you have concerns about your wingmen, please talk to your Flight Leader. Please try to do this on Friday. After the Row Briefing, get with your 2 wingmen and do a final Element Briefing. Talk about the take-off. Demonstrate the tempo of your head nod. Talk about gear operating speed limits and **have a plan for flaps on landing**.

Before engine start, walk around each of your wingmen's aircraft, looking for chocks, pitot covers, open windows, and open baggage doors. Look at their cowl door latches and that their cowl flaps are open. If one of your guys added a quart of oil, **MAKE** him check that the filler cap is secure. On the runway, check for seatbelts hanging outside cabin doors. This is an exciting time. Somebody might forget something. Help ‘em out!

**Emergencies.** In the event of a problem during the flight, be prepared to escort, or assign your other wingman to escort, the airplane with a problem. That group becomes a 2-ship with the stricken craft as Lead and the escorting craft as Wing. Escort will offer any assistance he can, while keeping a safe distance away. Should an aircraft go down, escort will be there to circle and help SAR find the site. Get away from 3000’ MSL. The pilot of the stricken airplane is obviously PIC, but it is a **BAD** idea to turn back to RFD. That’s head-on into a whole lot of Bonanzas and Barons.

**Debrief.** We conducted a 3 tier, top down, preflight briefing. Main Briefing, Row Briefings, Element Briefings. Debrief will be 3 tier, bottom up. Element Debrief, followed by Flight Debrief, and debrief by overall flight leadership. Set a time for your Element Debrief before taking off from RFD. Three pilots only. We recommend immediately after tying down. Address safety issues, if any, first. Take written notes of significant debrief items.

In RFD, Element Leaders will receive a Debrief Form from your Flight Leader. It has space for specific comments about the flight. We are interested in your assessment, based on objective observations, of the performance of your 2 wingmen, and of the element ahead of you. There is a block for you to beat on B2OSH leadership, too. There is NOT a block for radio discipline issues. All calls will be on the common flight frequency. We will hear everything you hear. Before exiting the Margarita and pizza party, please fill out your Debrief Form and bring it to your Flight Debrief.

Flight Debriefs should include only the 12 Element Lead pilots in the Flight. Flight Leaders will conduct their respective debriefs. Discuss safety items first. Flight Leaders will collect all Debrief Forms from their Flight (including their own).

Overall Debrief of Flight Leaders will be conducted in the big tent Saturday at 5:00 PM. Flight Leaders will turn in their Debrief Cards. Flight Leaders will have the opportunity to discuss route, altitudes, take-off timing, and effectiveness of clinic training.

You are the most experienced pilots in our fold. I cannot imagine a circumstance where any of you would interrupt the main briefing to add something, ask a question, or otherwise comment. If you have any concerns about the flight, now is the time to speak up – not during the briefing. Unless, of course, you think we are about to kill somebody.

This is going to be a great flight because you are all leading it. We thank you for your skill and good judgment. Many of you rode as safety pilots at one or more of the Regional Clinics. You guys are the real heroes of Bonanzas to Oshkosh.

If you have questions or comments, please call or email me.

Thank you for your service to B2OSH!

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