

# Thomas P. Turner's Mastery of Flight

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## FLYING LESSONS for April 25, 2024

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In most cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference in your success as the scenario unfolds. So apply these FLYING LESSONS to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command and are ultimately responsible for the decisions you make.**

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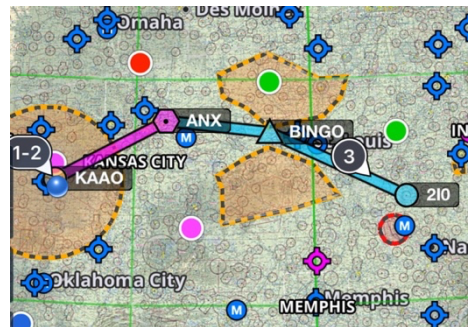
### This week's LESSONS:

#### None Shall Pass

**“Can you accept** a heading of 090 degrees?” I was talking to Wichita Approach through the Remote Communications Outlet (RCO) on the ground at Wichita Colonel James Jabara Airport (KAAO). I had previously called Approach on the RCO requesting my IFR clearance from KAAO to 210, Madisonville, Kentucky, to attend the annual [Beech Bash in the Bluegrass](#) fly-in representing [my employer](#)'s A36 Bonanza. Now I was getting my IFR release to depart on Runway 18.

**An almost-straight line** Great Circle GPS-direct route would take about 2 hours 50 minutes under current conditions. Those conditions, however, prevented a direct flight. Large areas of thunderstorms were massing across Kansas, Nebraska, Arkansas and Missouri, blocking my way in almost all directions. I could have gone south two hours to Dallas and turn east, but the Arkansas storms—covering almost the entire state—were drifting southeast, cutting me off from a turn northward to 210. Due east or nearly so was out of the question. There wasn't a northerly route or even a start northwesterly way around the huge areas of growing, severe-level storms.

**Except,** as I studied the observations and forecasts on my iPad at 9 AM, it looked like there was a gap—roughly 100 miles wide—forming in northeast Kansas. If I got in the air between about 9:30 and 10 AM I'd be in that gap about 120 northeast of KAAO as it passed near Kansas City, Missouri. Once north of the line I could turn east toward St. Louis, Missouri. From there it was a straight shot southeast to destination well ahead of all the weather. It was forecast to drift southeast and not affect the fly-in so there was no hazard to the airplane from the wind, hail and tornadic weather. I filed my flight plan, prepped the airplane I'd thoroughly preflighted while cleaning it on the two days previous, and completed all checklists and actions up to calling for my release. This route added only about 10 minutes to my estimated time enroute.



**Launching** into Instrument Meteorological Conditions (IMC), I had the approach chart for Jabara available in hard copy on the seat beside me. I had fully briefed the approach as if I was planning to fly it; I loaded but did not activate the approach on my primary GPS. I had everything

ready in case for any reason I needed to do a “takeoff abort” and return to the airport in instrument conditions. **This saved me some time and quite a bit of effort later on.**

**I’m sure Air Traffic Control (ATC)** has its reasons for always putting that initial heading into the form of a question. Of course my answer was yes. I switched over to CTAF (Common Traffic Advisory Frequency), reported my departure and took off. At 400 feet AGL (above ground level) I turned 90 degrees to the left onto the assigned heading and switched back to Approach to report myself as airborne. I entered the overcast at about 800 feet AGL and told ATC the altitude of the bases.

**I heard** an Air Force KC-135 tanker given a vector to intercept the Instrument Landing System (ILS) approach into nearby McConnell Air Force Base. I saw the four-engine jet on my ADS-B display changing heading to the south. My initial 3000-foot altitude restriction was lifted and I was cleared to my filed 9000 foot altitude. Shortly afterward I was cleared direct northeast to the Napoleon VOR (ANX) just east of Kansas City, my first enroute fix. ATC asked the tanker crew to report to cloud tops and they said they entered clouds at about 7500 feet. The controller repeated it to me to ensure I heard.

**At about 6500 feet** I broke out on top in still-hazy air, reporting to Departure that the local tops were at that height but the were higher cumulus all around. Very soon, however, I was back in the clouds. I leveled at 9000 feet, now speaking with controllers at Kansas City Center.

**On board** the company Bonanza we have ADS-B weather including lightning strike information. I also have my personal Garmin handheld moving map GPS with my SiriusXM weather subscription. But **my primary method of thunderstorm avoidance remains visual separation.** I couldn’t see what was ahead but the onboard weather painted greens, yellows and reds to both sides...and a few small areas of yellow and red were beginning to pop up ahead of me as well in that “gap” I planned to fly through.

**I asked Center** for a climb to 11,000 feet to see if that got me above clouds for visual avoidance and was immediately granted my request. At One-One Thousand I was in and out of clouds, approved to deviate as needed to avoid buildups. **The radar returns** were still about 30 miles ahead. **I still could not reliably see** the towering cumulus to avoid flying through them.

**ATC warned** of an area of “heavy to extreme precipitation” at my 12 o’clock and 40 miles, “extending for about 100 miles along your route of flight.” All the indications were screaming, **“None shall pass.”**

**“Kansas City Center, request”** I called. The controller responded and I said I wanted “to amend my clearance to return to Wichita Jabara.” “Do you want to go direct?” the controller asked. When I replied “yes” he replied, “Stand by, I’ll coordinate your return.” Meanwhile a USAFT-38 jet trainer turned back at a much higher altitude, also thwarted by the storms.

**I made my decision** to return soon enough I had plenty of time to wait. Shortly I was cleared direct to Jabara, descend at pilot’s discretion to 6000 feet. I punched Direct into the GPS and began my descent in IMC, increasingly bumpy. Every now and then I broke out briefly and several times made minor deviations around the larger clouds ahead. Nothing was on radar between me and Jabara. I picked up the ASOS weather, which reported an 800-foot ceiling, visibility 10 miles, with air pressure noticeably lower than when I had departed.

**When I was handed off** to Wichita Approach and checked in “with the Jabara weather,” the controller did not immediately respond. Instead, I heard this conversation:

- “Stationair [Cessna 206] NXXXXX, there’s an area of heavy to extreme precipitation 10 miles west of [Wichita] Eisenhower [KICT, the commercial field on the west side of the city] moving east at 35 knots that will arrive at Eisenhower about the same time as you. What are your intentions?”
- “NXXXXX, we’ll use Wellington [about 20 miles south of KICT] as an alternate.”

- “Do you want to change your destination to Wellington?”
- “Not yet. If we can begin our descent we’ll pick up some speed and that will help.”
- “Descend at pilot’s discretion, fly direct to [the initial approach fix for the approach].”
- “Wichita, NXXXXX wants to change our destination to Wellington....”

**The request**, of course, was granted.

**Then**, ATC asked me “which approach do you request?” and I answered the RNAV (GPS) 18...which I had already briefed, was mentally prepared to fly, and was loaded awaiting activation because I had done all that before takeoff in the case of an IFR return.

**I flew the approach**, breaking out about 130 feet above minimums, roughly 400 feet AGL. I was pushing the Bonanza back into the hangar when the rain started, and almost as soon as I had it inside and bedded down a massive, severe thunderstorm let loose. It turned Low IFR and stayed that way most of the day between successive lines of thunderstorms.

**Oh, and also....I’d checked** the electric trim as called out on the Before Takeoff checklist, of course. The trim had been nonresponsive a few times before, including when my boss flew it to North Carolina on company business last December. But it, and the autopilot, had worked normally most of the time. I already had an appointment at the avionics shop.

**The system passed** Before Flight inspection but failed when I tried to activate it on that initial 090 heading departing into IMC. The entire flight I described was hand-flown.

**I would not** have begun a flight in those conditions without a working autopilot. But once in the air I was OK for the time I expected to take to get to visual conditions, with Pilot Reports of cloud tops below my cruising height. And with the gap in the line of storms that looked before takeoff like it would remain open for my passage, I would be in clear air for most of the flight afterward.

**I’ll be rethinking** whether loss of autopilot in flight might be reason for an immediate landing, at least under some conditions. This was a good use of my training and recent instrument experience. But you know what they say about using superior judgement to avoid having to use superior skill....

**Have you ever** flown a similar weather encounter? Have you ever flown 75 miles or so then decided to head back from whence you came? Have you done any unplanned en route diversions to a landing? Do you consider a working autopilot to be required for a “go” flight decision? Does that answer change under different conditions?

**Let’s learn** from each other. Send me your experiences, for publication or indicating you don’t want it published if that’s your choice, at [mastery.flight.training@cox.net](mailto:mastery.flight.training@cox.net).

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