

The question of whether or not to equip our airplanes (and ourselves) for instrument flight is a frequent topic of discussion whenever pilots and homebuilders talk about their projects. This issue came up awhile back in an online discussion group and it prompted me to share my recollections and thoughts about two of the flights in my logbook. I've encountered five emergency situations in fourteen years and 1000 hours, declared four of them (there was no time to do so in the other), and had the trucks rolled on three occasions. The two flights in question were separated by almost seven years, several ratings and over three hundred hours of experience. Both flights bear directly on the subject of IFR preparedness.

The first incident occurred in October, 1991 when I was a new private pilot of about 110 hours. I had flown a rented Arrow from Hanscom Field (BED) down to Martha's Vineyard (MVY) on a first date adventure with a young lady I'd just met. The trip down was great and, after a pleasant day on the island, I got a weather briefing for a night VFR trip back to BED. The briefing was for good VFR, with ceilings & visibility that gave me no reasons for concern. We departed MVY shortly after 10 PM. Immediately after takeoff, I realized that I had no horizon reference over the dark ocean.

My primary instructor had made me aware of the phenomenon during my initial training and had actually demonstrated it to me in the few hours of training for my instrument rating that I'd accomplished at that point. I felt comfortable on the gauges and wasn't worried. About twenty minutes into the flight, I realized that I had no view of any lights on the ground. Assuming that I was either still over the water or, perhaps, over a wooded area of Cape Cod, I pressed on. Shortly thereafter, while flying entirely on instruments, I became aware of rain on the windshield.

At this point, I knew what had happened and immediately declared the emergency to Boston Approach, with whom I was already receiving flight following. They advised me that unforecast weather had moved into the area (I already knew that!) and also closed in behind me. They asked for the usual info: number of souls on board, fuel remaining, etc., and here I made the night's worst error: I deliberately informed them that I had much less fuel on board than I actually did because I didn't want to deal with the possible first date awkwardness at a hotel if stranded away from home. I wanted them to feel like they needed to do something for me in the local area. At the same time, I knew that only I could truly do anything to help myself and that I'd taken the first steps by continuing to FLY THE AIRPLANE and by communicating my situation to ATC.

When asked to state my intentions, I asked to be vectored to the ILS 11 at BED. They asked if I was rated and equipped and I responded truthfully that the plane was equipped, but that I'd only had about ten hours of training toward my instrument rating. Nevertheless, I wanted to try the ILS. I didn't have approach plates on board, but I knew the numbers and the approach controller confirmed them. To make a long story slightly shorter, I got turned on slightly outside the marker and wasn't able to stabilize on the localizer. In short, I got blown off full-scale due to my inexperience in tracking. Once again, I was asked to state my intentions and, once again, I requested vectors to the ILS 11, but a bit further out this time to allow for a longer shot at

stabilizing on the localizer. I wound up getting blown off full-scale again. Asked yet again to state my intentions, I recalled an article that I'd read maybe a week beforehand in one of the aviation magazines that suggested that rain clouds almost never go all the way down to the surface of the sea and, if in this sort of trouble near the coast, to descend over the ocean until breaking out. With that in mind, I asked Boston to vector me out five miles east of Logan and I'd give them a straight and level descent to 500 feet and see what happened. They complied, I broke out at 800 feet, saw the lights of Hull and landed at Logan to be met by the trucks.

That was right about when my companion realized that something was amiss. They had a cup of coffee waiting for me after I shut down and some forms to fill out. Amazingly few, actually, considering that I had single-handedly shut down Boston's TCA (now Class B) for over an hour. I was invited to return the next night and visit the TRACON and meet 'my' controller. When I showed up the next evening and was introduced to the room as the Arrow pilot, I got a brief round of applause for surviving, though at that point I felt like a complete fool for having gotten myself into trouble in the first place (and for passing up the possibility of being vectored to good VFR by concealing my true fuel status). I spent a very educational hour or so plugged in with my controller from the previous evening and learned that, from my emergency declaration to my landing at BOS, over an hour had elapsed, though I'd guessed only about 30 minutes when asked. Time has a way of compressing when we're so intently focused upon the task at hand. It's not the only time I've experienced the feeling, but it's certainly the most extreme example I've encountered. What happened with my date is another story... :-)

The second incident occurred in June, 1998 when I was a new CFI accompanying a friend from BED to New Orleans and back in his Cardinal. We took off from BED in heavy rain, but were soon on top in the brilliant, late spring sunshine on our way to Islip (ISP) to have breakfast with my parents before continuing south. After breakfast, we briefed and filed, said so long to my parents and headed out for the second leg of our trip.

The weather was close to minimums, which in retrospect may not have been the wisest choice to make in a single, but wasn't at all unusual in my experience at that time. It was my leg and I was flying from the left seat. Our runup was unremarkable and we launched. About two minutes after takeoff, while solidly in the soup, we both smelled that unmistakable aroma of something electrical toasting. The overvoltage light was on and the alternator breaker was popped. We glanced at each other and I said it first: We're going back to ISP, NOW! While those might not have been the first words out of my mouth, they did get said...

I had just taken the plate for ISP's active runway off my yoke clip and my friend still had it in his hand. I put it right back up there and told NY that I was declaring an emergency and that we were returning to ISP. Meanwhile, I reset the alternator breaker to see what it would do. It stayed reset for maybe five seconds before popping again. At this point, I knew that I'd made the right choice, though I can't honestly say that I ever second guessed myself. Partly because that's somewhat out of character and partly because the whole cockpit still smelled like an electrical component had fried.

As we got vectored back to the ILS, I turned off everything but the nav/comm I was using and the transponder, then told NY to get one last fix on me if they wanted it because I was turning off the transponder, too. I figured that it wasn't doing anything for me and they already knew where I was. At 200 feet we still hadn't broken out and my friend made some comment about going missed. I wasn't having any of that, since I wasn't going to bet my bippy on his battery after something had already given up the ghost in his electrical system. We continued the approach, broke out around 150 AGL right on the extended centerline and landed uneventfully. The trucks followed us dutifully back to the ramp and presented me with a brief form to fill out. As it turned out, the voltage regulator had died and the alternator was not happy with the situation (major understatement). Boy, were my parents surprised to get called back to the airport... :-)

Some general thoughts: A new pilot, or a pilot with newly acquired skills, is like a child who hasn't yet gained the experience to know what he doesn't know. Unfortunately, that knowledge is sometimes necessary to keep ourselves alive. Reading and hangar flying can certainly supplement our experience, regardless of how much we may have at any given time in any particular area, but there's no substitute for the experience gained by actually getting our hands on an airplane and FLYING. My own comfort and complacency as the first flight began was delusional.

What I believe kept me alive that evening was my efforts, in the short time since earning my private certificate, to broaden my aviation knowledge and experience (tailwheel checkout, basic aerobatic course, high performance/complex training, beginning my IFR training, constant reading of everything related to aviation that came my way, etc.), coupled with my own ability to compartmentalize, prioritize and focus -- all of which were expressed that night by never giving up, by thinking of possible solutions to my situation (like recalling that recently read article) and by continuing to FLY THE AIRPLANE.

In the case of the second flight, the fact that everything concluded so uneventfully was due almost entirely to the fact that panic never entered into the equation and that proper training took over and ensured a positive outcome.

My purpose in sharing these events is not to blow my own horn for having survived, but to illustrate several things: that the best of intentions and weather briefings will not guarantee that a VFR flight will remain so, especially at night; that a clear head and a cool hand will see almost any emergency to a happy conclusion (in my opinion, it is panic that kills pilots, secondary to the actual emergent situation, whatever it may be); that even the most thorough preflight won't prevent all equipment failures (so don't depend on your autopilot, for example, to assist you in conditions or in an airplane that you aren't prepared to hand fly in those conditions); and that proper training and the competence and confidence that result from it will see a pilot through more often than not.

As an instructor, it's often been my observation that one can't teach critical thinking and decision making, but only lead by example, as it were. I imagine that it's much like parenting (I don't have any kids), in that I regret it's not possible to show a student everything, but merely to

expose them to as many situations and environmental variables as possible in the course of their training, in the hope that, if push ever comes to shove in their own flying, they'll have sufficient background to creatively work the problem.

My best advice is to continually challenge oneself to gain and maintain new skills, including undertaking long cross-country trips that will expose one to the 'real world' of flying, whether VFR or IFR, and garner for oneself the experience that simply cannot be gained during trips around one's own practice area and, in the process, gain the cumulative experience that will serve, if necessary, in extremis.

Any other conclusions I leave to those many readers with different experience than mine. Not greater, necessarily (though they're out there in abundance), but different, as I believe that we all have something to learn from each other and that each individual, from the newest pilot to the most experienced, has seen and learned something of value for himself and the rest of us, if only he can identify and communicate it.