Pilot-Controller Communication Pointers

ASRS receives many communications-related incident reports that contain reporters’ suggestions for improving the communications flow between cockpit and ground. A recent controller’s report offers words of wisdom for pilots who monitor ATC frequencies en route, as well as a useful phraseology suggestion for controllers.

I was providing on-the-job training to a recently transferred controller on Approach/Departure Control. Air carrier “X,” a B 727, departed runway heading climbing to 3,000 feet. The air carrier checked in...and was assigned 8,000 and turned direct approximately 240° heading. I had been watching a primary target (no transponder) for a few miles that was now 6 nm due west of [air carrier’s departure airport], eastbound. I instructed the trainee to “issue the traffic.” The traffic was issued with air carrier “X” instructed to “stay on runway heading.” The pilot responded that they were heading 270°...and asked if that would be OK. At first the trainee said 270° would avoid the traffic, then realized it would be too close and turned the air carrier back to 290°. Air carrier “X” then reported the traffic in sight less than 1/2 mile, “heading right at us at our altitude” (4,000 feet)... The pilot questioned how close the traffic came... We told him there was no transponder, no altitude.

Wetacked the primary target to a small airport. Before landing, the pilot asked Approach for a transponder check (his first contact with ATC since departing airport in another state). The pilot called us on the phone and said... he was monitoring the ATC frequency and “thought you might be talking about me after I saw the 727 go by.” Why the pilot monitored the frequency and never called us is beyond me. We could have avoided an NMAC... If the ATC service is there, use it! It’s less workload on ATC to track an aircraft and give an altimeter [setting] than constantly be issuing traffic “type and altitude unknown.”

My technique, which I recommend, is to add the phraseology “no transponder” when making a [traffic] call to a TCAS-equipped aircraft... Adding “no transponder” gets everyone looking out the window instead of looking at a blank TCAS box.

Night Flights Over City Lights

Nighttime approaches over the bright lights of large metropolitan areas offer visual orientation challenges that multiply if the area is unfamiliar, as discovered by this General Aviation pilot:

Came from north with flight following under Class B. Handed off to Tower to report at [a local landmark]. Acknowledged being unfamiliar and Tower instruction was to follow freeway and do a short approach to 19R. The freeway splits and I followed the southern branch – reporting in error, airport in sight. I thought the dark river valley south of the actual airport was the airport.

Obviously, in retrospect, I hadn’t... recognized that the beacon was on the wrong side of the freeway for what I was calling the airport. As I approached the departure end of 19R/approach end of 1L, the controller recognized I was in the wrong position... Simultaneously I also recognized that I didn’t have the airport in sight and was actually setting up to land in some mud. The controller sent me around to approach end of 1L/approach end of 19R. Local landmarks to unfamiliar pilots should be red flags to explicitly ask for vectors and be very clear to the controllers to follow [progress] carefully.

Got Oxygen?

There’s the story about the little girl who misbehaved and was asked by her shocked mother, “Don’t you have manners?” “Yes m’am, I have ‘em,” she replied, “I just don’t use ‘em.” That story came to mind when we read this First Officer’s report to the ASRS:

I was flying a rotation as part of my Initial Operating Experience (IOE). I was acting as First Officer, Pilot Flying. FAA Aviation Inspector was riding the jump seat. Captain left the cockpit to use the lavatory. As soon as the traffic was replaced controller on Approach/Departure Control. Air carrier “X” instructed to “stay on runway heading.” The pilot responded that they were heading 270°... and asked if that would be OK. At first the trainee said 270° would avoid the traffic, then realized it would be too close and turned the air carrier back to 290°. Air carrier “X” then reported the traffic in sight less than 1/2 mile, “heading right at us at our altitude” (4,000 feet)... The pilot questioned how close the traffic came... We told him there was no transponder, no altitude.

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Low Altitude Frights

A General Aviation pilot was taking a friend on a daytime sightseeing tour over a coastal harbor at 900 feet MSL. The area was well known for its high bird concentrations. The pilot had avoided hitting several birds early in the flight, according to his ASRS report, when luck suddenly ran out:

...A bird bounced off the windshield creating a small crack. In less than a half-second, 50% of the windshield caved in and struck me in the face. My passenger was struck on the forehead and lip. It felt as if someone had punched me in the face. After recovering my glasses, it took about five seconds to get control of the airplane. The altimeter read 900 feet, but I could see we were less than 200 feet AGL. For this reason I believed the onrush of air had caused a malfunction of the static system. This was further confirmed by the fact that my airspeed indicator was barely in the green arc, despite indications to the contrary, such as a GPS ground speed of 122 knots and a tachometer reading of 2300 RPM.

As a result of the airspeed indicator being unreliable, I felt a long runway was needed. I called Approach to get vectors to land at [airport ABC]. Approach suggested [airport XYZ], which was three minutes closer. I preferred a vector to ABC because I was more familiar with the obstacle clearances and runways at ABC. Holding a map and even changing radio frequencies was very difficult with all the wind in the cockpit. I was having difficulty keeping a steady altitude and heading, since my free hand was used to hold onto a piece of the windshield and loose maps were flying around the cockpit.

I had to enlist the help of my passenger, when the other 50% of the windshield was on the verge of giving way. She held onto the jagged piece for the duration of the flight. She was very calm and helpful. I had briefed her about her “duties in the cockpit” and what to do in case of an emergency. The tips about CRM from CALLBACK over the years had paid off in spades...

I would like to say that greater vigilance would have helped, but I’m not sure that’s true, since I am very paranoid while flying over the harbor. I have always felt that any low altitude flight has a high level of risk in any aircraft. I am no longer taking passengers around the harbor for sightseeing.

This pilot demonstrated skill, perseverance, and solid resource management techniques in getting the aircraft under control and landing safely. We were most gratified to hear that lessons learned from CALLBACK gave an assist. Chapter 7, Section 4 of the Aeronautical Information Manual (AIM) is also recommended reading for information on bird strike hazards and risk reduction techniques.

Go Fly a Kite (Carefully!)

It may be tempting to think that aviation is all about airborne experiences, but a large number of aviation enthusiasts enjoy ground-based hobbies that involve moored (tethered) devices such as balloons and kites. An instrument rated pilot who was hosting a “kite party” describes a near encounter between a sports kite and a helicopter:

...We held a kite flying party at our farm. At one point we had probably a dozen kites flying, some at altitudes of 500 feet, perhaps even more. One kite in particular was notable because it is 4 feet by 5 feet and is normally flown on a 250# dacron line. Although this kite is legal under FAR Part 101, I’d hate to be the one to run into it in any aircraft. At the time of the incident, this kite was flying at perhaps 350 feet AGL. With very little warning, a state police helicopter made a very low, high-speed pass over the field. At the time of the incident, this kite was flying at perhaps 350 feet AGL. With very little warning, a state police helicopter made a very low, high-speed pass over the field. As an instrument rated pilot myself, I’d say his altitude was less than 200 feet AGL. He must have seen it because after flying right past the kite, he suddenly reversed course and carefully circled the field. The pilot of this helicopter is fortunate. I was unable to read his tail number due to his high speed...

While it's true the helicopter pilot bears the brunt of responsibility for this incident, I am not blameless either. I know that state helicopters often land behind the elementary school to the east of my farm. I also am aware of extensive training activity from 500 feet AGL and up. As if that weren't enough, there is extensive ultralight activity in my area too. Part 101 does say that we, as kite fliers, should not present a hazard to other aviation activities. In that light, I intend to discuss this issue with my local FSS to see if they can put out a NOTAM concerning our activity...

It would be a good idea for our reporter to brush up on the applicable regulations, too. FAR 101 prohibits the flying of moored kites more than 500 AGL and within 5 miles of the boundary of any airport. It also requires that kites flown between sunrise and sunset have colored pennants or streamers attached to the mooring lines at not more than 50-foot intervals, beginning at 150 feet above the surface of the ground and visible for at least one mile.