

CALLBACK

From NASA's Aviation Safety Reporting System



Issue 462

July 2018

AIRSPACE VIOLATIONS



The National Airspace System (NAS) is complex. The NAS comprises controlled, uncontrolled, special use, and other airspace. Types of airspace are dictated by the complexity or density of aircraft movements, nature of the operations conducted within the airspace, the level of safety required, and national and public interest.¹ Each type of airspace has its own rules and regulations that govern aircraft operations. The NAS must accommodate a multitude of different and changing operational needs. It is continually being modified, and accordingly, high levels of proficiency and adaptability are required from both pilots and controllers.

Any unauthorized entry into NAS airspace is a Federal Aviation Regulation (FAR) violation and may result in an airborne conflict, reduced separation, or a decrease in flight safety. Unauthorized entries occur for many reasons. Procedural errors, airborne conflicts, misconceptions regarding airspace or specific operating requirements, and disregard for FARs have all been identified in reports submitted to ASRS.

This month *CALLBACK* shares reported incidents of airspace violations along with some of the reporters' reactions, concerns, and insight.

FROM ONE THREAT TO ANOTHER

A BE200 pilot observed an intruder on the Traffic Alert and Collision Avoidance System (TCAS). The airborne conflict and subsequent evasive action resulted in an unannounced incursion into Class B airspace without prior clearance.

■ *After a VFR departure, the Tower approved a right turn on course for departure eastbound. Shortly after departing the Class D airspace during level cruise flight at 4,500 feet MSL, I saw a TCAS target appear about four miles ahead and around 500 feet below my altitude. I continued to scan outside trying to visually acquire the traffic as well as update their position on the TCAS. As I approached the target, it began to indicate a climb on the TCAS. I was unable to acquire it visually and unable to determine a direction of travel. At a distance estimated at less than one-half mile on the TCAS screen, I took evasive action in the form of a climb to avoid a potential collision. There was no other traffic displayed above us in the area. During the evasive action, I inadvertently penetrated the overlying Class B airspace starting at 5,000 feet MSL by an estimated 300 feet for about*

30 seconds. After passing the TCAS target, I descended back down below the Class B airspace. I was not in contact with Approach during or after the...incident.

INS AND OUTS OF CLASS B AIRSPACE

This air carrier Captain was vectored out of and back into Class B airspace. The incident triggered questions, concerns, and misconceptions regarding Class B requirements.

■ *We were coming into New Orleans on the RYTHM arrival, which ties directly to the RNAV [approach to] Runway 20. Somewhere around OYSTY, Approach cleared us to 2,000 feet, slowed us to 210 [knots], and cleared us for the approach. We were in IMC. We descended to be outside JASPO (the FAF) at 2,000 feet. This resulted in... getting down to 2,000 feet prior to 15 NM from New Orleans (outside the Class B), doing about 210 knots. When we got to RAYOP, Approach said, "You are reentering the Class B." Oh. Whoops. Class B excursion.*

This whole Class B thing has become such an issue that I don't even know what is right anymore. Clearly we were speeding below the lateral limits. However, I was under the impression that the Class B excursions have been occurring during visual approaches, where the pilots are operating on their own recognizance and descending too soon. In this case, we were under ATC control, on an instrument approach, and in IMC. The Controller gave us a clearance below the floor of the Class B, and at a high speed... We were at an ATC assigned speed too high for that position. Are we really supposed to be trapping this type of ATC error...without the tools to do so?... I just don't understand what's going on.... [ATC] did not warn us that we might go out the bottom and...didn't tell us when we did.

DO NOT ENTER

An air carrier Captain did not recognize a procedural error that occurred prior to departure. That error led to a late turn immediately after takeoff and resulted in the aircraft entering a prohibited area.

■ *I was Pilot-in-Command.... After all pre-departure checklists were completed, we taxied to...Runway 1 for takeoff. I glanced over at the First Officer's (FO's) side to see if everything was set up.... Everything looked normal....*

We made a normal takeoff, broke ground, and did the normal post-rotation clean-up of the aircraft. When we reached the fix on the departure...[where we should have] turned...up the river, I knew something was wrong. I grabbed the yoke and made an immediate left turn...back on course. When I looked at the FO's [Primary Flight Displays (PFDs)],... they were configured incorrectly for the takeoff, so I...corrected his displays. After [that], I engaged LNAV and VNAV to their normal takeoff configuration...[and] selected the autopilot on.... I glanced out my left window and saw [that]...I was still over the river. Shortly afterward, we were handed off from Tower to Departure.... At some point, we were queried if we had a minute to talk.... The Controller then informed us that we had a "possible traffic deviation." I started thinking about it and did not think I had done anything wrong. When I landed,...I was informed that we had penetrated the P-56A airspace that protects the White House.

The event occurred because one pilot was not in [the proper] FMS [mode].... When the airplane wanted to turn, it was not [directing the FO] to do that. I will now double check the screens and navigation tools that are supposed to be on...for takeoff.

IT'S A BIRD, IT'S A PLANE, OR IS IT?

A private pilot sighted what was thought to be a large bird in controlled airspace. The pilot's confusion changed to surprise when the species was identified.

■ [I] departed Grand Prairie Municipal Airport at 2,500 feet with a southerly heading until I was clear of Cedar Hill (all the big towers). Once clear, I started to turn left to overfly Mid-Way Regional Airport [JWY] and climb to 3,000 feet. [Beyond the] Class B [airspace], I started my climb to 7,500 feet toward the Little Rock area. I was using Terrell Municipal Airport as a fix and a check for weather and altimeter [setting] when I noticed something that looked like a bird.... I see a lot of birds of different types, and I thought I was seeing a bird at first. I thought, "Good, I'm higher and the bird should not be a factor." Then I tried to refocus my eyes as the movement wasn't quite like a bird; it was close, but not the same. Worse, my brain was not making sense of what kind of bird this might be as I was trying to "see" a black vulture.... My eyes kept telling me that this black vulture had four evenly spaced red dots (as a square) on its back.

Then I got mad – that's a drone. And since I don't know a lot about them, I have no way to process how close the drone was. My best guess is within 500 feet.

My position was...southwest of Terrell Municipal Airport at 7,500 feet.

AVIATE, NAVIGATE, AND COMMUNICATE

An airspace violation, aggravated by communication errors, resulted in multiple airborne conflicts, confusion, and angst for all before the situation was resolved.

From the Tower Controller's Report:

■ While working Local Control North, landing Runway 9L on East Flow, I encountered a situation where Aircraft X was catching up to Aircraft Y, which had been previously cleared to land. The separation between those two aircraft decreased to about two miles, and I still was not talking to Aircraft X. While focused on that, a different aircraft, Aircraft Z called my frequency on about a seven or eight mile final, which would put them close to [another airport]. I advised Aircraft Z to continue, not realizing that he was about to inquire about the VFR target below them and about a mile in front of them. When they pointed out the target to me, I exchanged a brief traffic call but Aircraft Z was already responding to a Resolution Advisory (RA). I asked them to advise when they could continue the approach. The VFR target Mode C displayed...2,300 feet while Aircraft Z was level at 3,000 feet. Aircraft Z said that their TCAS showed the VFR target only 300 feet below them and climbing. As this all was happening, I still had yet to rectify the two aircraft that were inside the Final Approach Fix (FAF) with reduced separation. Everyone continued and landed without incident. I was not talking to Aircraft X, which was getting too close to Aircraft Y, so my focus was on working from the airport out on my final [approach].... Aircraft Z was on my frequency, [but was] outside of my airspace without all conflicts being resolved in [the Terminal Radar Approach Control (TRACON)] airspace.

From the Approach Controller's Report:

■ Aircraft Z was inbound...from the northwest. Aircraft Z was cleared for the Visual Approach to Runway 9L. A VFR aircraft departed [another airport] and was in a climbing left turn to 2,300 feet and headed west. [The other airport] is eight miles west of Aircraft Z's destination. The base of the Class B airspace is 1,900 feet, so the VFR [aircraft] was a Class B violator. The VFR [aircraft] passed within 700 feet vertically and 0.48 NM laterally from Aircraft Z. No traffic was issued. Aircraft Z switched to...Tower before they were supposed to and advised Tower of the TCAS alert. I should be more aware of VFR traffic in the vicinity of [the other airport].

1. https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/17_phak_ch15.pdf

ASRS Alerts Issued in May 2018	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	9
Airport Facility or Procedure	4
ATC Equipment or Procedure	5
Hazard to Flight	1
TOTAL	19

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A Monthly Safety
Newsletter from
The NASA
Aviation Safety
Reporting System
P.O. Box 189
Moffett Field, CA
94035-0189
<https://asrs.arc.nasa.gov>

May 2018 Report Intake	
Air Carrier/Air Taxi Pilots	5,065
General Aviation Pilots	1,292
Controllers	583
Flight Attendants	454
Military/Other	320
Mechanics	263
Dispatchers	191
TOTAL	8,168