

Query ATC

An ATC Specialist Answers Your Questions Part 2

by Matthew McDaniel

[Author's Note: The following continues our discussion of questions submitted by pilots, under a solicitation of, "If you could sit down with a professional air traffic controller and ask them any question, what would you ask?" No limitations were imposed and scenario-based questions from actual experiences were encouraged. Identifying information has been removed to protect the submitter's privacy.]

Our Controller, Jesse Belleau, is an FAA Air Traffic Control Specialist at Boston Consolidated TRACON. He has a Bachelor's Degree in Aviation/Air Traffic Management from Daniel Webster College. His primary location is Logan Airport, with services provided to numerous other smaller fields in the greater Boston area, including Bedford-Hanscom Field, the area's primary GA reliever airport. This consolidated facility also includes what used to be Manchester approach control, servicing Manchester, N.H. and many general aviation fields in southern New Hampshire. Mr. Belleau has been an active instrument-rated private pilot for over eight years.

Cirrus Pilot (CP): Many pilots think that when they hear "radar contact," that ATC assumes responsibility for terrain clearance. What would ATC like us to know about who is responsible for what?

Jesse Belleau (JB): "Radar contact" implies that a specific aircraft has been identified and verified on radar, it does not imply that terrain and aircraft separation are

automatically guaranteed. Many times an aircraft is radar identified below our Minimum Vectoring Altitude (MVA), less than the required IFR radar separation, or in another controller's airspace jurisdiction. This happens often when an aircraft departs VFR and then requests an IFR clearance. The controller must first resolve whichever issue is at hand before an IFR clearance is given. If the aircraft is VFR, they are still responsible for their own terrain and obstruction clearance, regardless of communications with ATC. An IFR clearance cannot be given until all conflicts have been resolved and the aircraft is in a safe environment to do so.

CP: What is the preferred way to cancel IFR when you are going into a non-towered airport and cancelling in the air is not an option – a phone call to ATC, phone call to FSS, relay through another aircraft, etc.?

JB: I would have to say that any of the above options are all good ways to cancel IFR on the ground. Since the airport must be protected until the cancellation is received, any method that would guarantee we receive the message in a timely manner is preferred. I would recommend using whatever clearance delivery option is published for that airport because the controlling air traffic facility will expect that. A phone call directly to ATC is not necessarily the easiest option for the controller, because the phone is usually located away from the controller's workstation, and if they are the only one

in the room, such as on a mid-shift, they would have to temporarily step away from the work station. Depending on the volume and complexity of traffic, getting up to answer the phone may not be feasible.

CP: At complex airports with multiple FBOs, does ATC like to know in advance where you are parking? If so, when, and to whom, should you give that information?

JB: ATC always prefers to know as much information in advance as possible. A proactive controller will request such information so as to expedite their own traffic flow, as well as provide better customer service to the pilot. If you are approaching a runway that has parking on either side and have not been asked, then any time you are able to transmit your parking location would be a good idea. If there is an obvious option, or the information is not necessary until after landing, either ground control will ask, or you can inform the ground controller once you're off the active runway on initial contact. When in doubt of anything, I advise you to always ask. A good controller will always appreciate and understand any question used for clarification.

CP: While getting my IFR clearance, everything was changed from what I filed for. I could not find one of the fixes. I asked them to repeat it twice and then asked him to spell it. Still, I could not find it and it was not in my GPS database. I had to refuse the clearance and the only response I received was, "State your intentions." I departed VFR and when I contacted the next controller, he gave me a new route. I asked about the mystery fix and was told it was a high altitude fix and thus, not on my charts (it was a short flight below the flight levels and, thus, I did not see any reason to reference a high altitude chart)! My question is, how can we best predict our IFR clearance on a given day? With a problem like not being able to find a specific fix, what could I have done better with the clearance to try to get that resolved on the ground?

JB: Almost all route clearances in today's congested airspace are preferential routes (PDRs). For the controller, most routes are rather unknown once outside of our jurisdiction and the only information we have is a route with a bunch of fixes on it. When we see a route, we don't always know whether the fix is high altitude, or one that is only published on certain charts. Usually, in a case like this, the controller would call the Center and ask the same question you asked them. The Centers are the main facilities involved with the routes and they can easily amend them or create a different route. There is almost always a different route available to any airport. Routes also differentiate based on altitude

stratums, whether it is Center controlled airspace or terminal altitudes; 10,000 feet and below will be one set of PDRs, and above that will be a different one.

As I said earlier, almost every route, at least in the Northeast, is a preferential route and will always be the same to a given airport. The best way to resolve the situation on the ground would be to state that there is an issue with the route. It is our job to help resolve the situation, and we have many resources to help find an answer. I'm not sure why this particular controller did not do that, but that is our job and I hope you find that most times the answer is easily obtainable.

CP: Regarding extra comments during a given radio transmission, what is considered the very best practice? Should all transmissions be kept to bare bones? If not, when are things like "Good morning," "Level at...", "unsolicited ride reports, or other non-mandatory comments appropriate?"

JB: With regards to extra comments, they can be used at discretion with common sense and frequency awareness. For the most part, anyone on frequency can judge how



congested it is and whether or not the extra verbiage is appropriate. We are taught and held to a standard of "prescribed standard phraseology." However, there are many times when nonstandard phraseology and extra comments are necessary. Unsolicited ride reports or any other comments and PIREPs the pilot feels are necessary should be passed along and the controller can disseminate the information as necessary. Any reports are appreciated, and we do pass them along to other aircraft, FSS, and any other facility that may be affected. Standard phraseology

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is a necessity for pilots and controllers to always make sure the message is understood accurately, but adding a “good morning,” “have a great day,” or any other polite comment can help change the atmosphere of the frequency for the better. I recommend using your best judgment as to when you think those comments are warranted.

CP: With the large (and increasing) number of RNAV (GPS) procedures available to IFR pilots, we often prefer to go direct to one of the IAFs for several operational reasons. Does this pose a problem for ATC? Does ATC prefer this over providing radar vectors? When is it most appropriate to inform ATC of your desire to begin the approach at a given IAF?

JB: The only situations I could see using radar vectors to final over a pilot requesting direct to an IAF for an RNAV (GPS) approach would be due to traffic volume, complexity of airspace, or pilot request. Most IAFs are relatively far away from the airport, so if there are numerous aircraft inbound for the approach, vectors to final expedite the handling and keep the traffic confined to a much smaller area. Also, some approaches cross numerous sectors or other airports, involving controller coordination between sectors as well as blocks of airspace. This coordination is sometimes not feasible and keeping an aircraft in closer to the FAF may be the only option without posing a delay to the aircraft. I don't see much of a preference to either option, direct to the IAF or radar vectors to final; for the most part it is the pilot's option. I believe controllers may initially state “vectors to final” because of the time and distance it saves the pilot. Whichever way is preferred, ask the controller, either on initial contact or once he is about to give a control instruction, what you would prefer. The controller will inform you if your request is not practical and should state the reason why.

CP: If a pilot asks for a “VFR-on-Top” clearance, can ATC refuse that request? Why or why not?

JB: Yes, ATC can refuse a VFR-On-Top clearance because it is a

clearance under IFR (Instrument Flight Rules). Even though the aircraft is in VFR conditions, they are still following an IFR route under an IFR clearance. Upon refusal of the clearance, the controller must offer an alternative. Our 7110.65 operations manual states, “When, in your judgment, there is reason to believe that flight in VFR conditions may become impractical, issue an alternative clearance which will ensure separation from all other aircraft for which you have separation responsibility.”

I could see a refusal for such a request when in heavily congested airspace or during marginal VFR conditions when the controller may feel that the VFR conditions are unobtainable for a long duration. We see this request so infrequently that I don't see a controller denying it often.

CP: Do modern controllers know about contact approaches? How would you characterize ATC's typical feeling about them and the pilots that still request them on occasion?

JB: Modern controllers do know about contact approaches and we do have a section in our operations manual specifically for that type of approach. However, we cannot solicit such an approach and so few aircraft request one that most controllers are rather unfamiliar with the procedure. We cannot vector an aircraft for any approach below our Minimum Vectoring Altitude (MVA), so if the aircraft has ground contact at the MVA, it is usually enough to conduct a visual approach. In many cases, the MVAs can be rather high in the area surrounding an airport and vectoring for the instrument approach is more expeditious for all. I would say ATC's typical feeling about the approach is hesitation, simply because it is seen so infrequently. Although, if a pilot requests one, it usually means they are familiar with the area and that increases the controller's confidence in the procedure. The few times I have heard the request, I have had no issue approving the procedure. If the aircraft is unable to achieve ground contact, a simple vector for an instrument approach is an easy alternative.

CP: Barring any specific instruction about speed, when does ATC expect an aircraft to slow to its approach speed?

JB: Without any specific speed instruction given, we must expect an aircraft to start slowing at any point approaching the airfield. Aircraft and company policies differ so greatly that we must always assume an aircraft can and will start slowing down at any given point in time. Our general understanding of airspeed is that the aircraft must be fully configured prior to the FAF, so with no speed assignment given, we assume the aircraft will be at approach speed somewhere between the Intermediate Fix (IF) and FAF.

For our general rule of thumb with assignable airspeeds, we understand maximum airspeeds just prior to the IAF to be 210 knots, 190 knots prior to the IF, and no more than 170 knots to the FAF. If you're flying in to a busy airport with an aircraft that is unable to maintain those speeds, early notification is greatly appreciated so we can build our sequence around the airspeed you can maintain. Since we don't know the capabilities of every aircraft, notification of speed performance is critical, so we don't push a pilot beyond their comfort zone or capability.

CP: Should Mode C be routinely left on while on the ground, or only at airports where such a procedure is broadcast on ATIS? As a follow-up with the same question, what about using Transponder in the ON or GROUND setting only (as opposed to ALT)?

JB: I would say that Mode C only needs to be left on at airports that broadcast it because they use Airport Surface Detection Equipment (ASDE-X) ground surveillance radar to track the aircraft based on your discrete beacon code. However, it might be a good operating practice to leave Mode C on for all ground operations regardless of the airport so it will become common practice since more airports are implementing such equipment. Leaving the transponder on STANDBY means

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that radar will not interrogate it, mitigating the chance for false radar acquisition while still on the ground. If the transponder is ON, there is a chance the radar may have a brief hit on the target but no altitude will be shown. When this occurs, we have to suspend the target in our systems until the aircraft is airborne and reacquired. That is a shortcoming of the system, but occurs very rarely. Logan Airport uses ASDE-X, so all aircraft on the ground are required to squawk Mode C; however radar acquisition of a target on the ground almost never occurs.

[Author's Note: In addition to Mr. Bulleau's comments above, it should also be noted that wording in the Aeronautical Information Manual (AIM) was modified in 2012 regarding the proper usage of transponders on the ground. In some cases, the AIM's instructions on transponder use would require the pilot to override the automatic transponder mode switching features built into many modern aircraft's avionics system (including most Technically Advanced Aircraft). I encourage pilots to study these latest revisions to the AIM in order to best understand and comply with these evolving rules and suggested practices.]

Our sincere thanks to Mr. Belleau for taking the time to answer our questions: expanding both our knowledge levels and safety margins. 

About the Author: *Matthew McDaniel is a Master & Gold Seal CFII, ATP, MEI, AGI, & IGI and Platinum CSIP. In 24 years of flying, he has logged nearly 14,000 hours total, 5,000 hours of instruction-given, and over 4,000 hours in all models of the Cirrus. As owner of Progressive Aviation Services, LLC (www.progaviation.com), he has specialized in Technically Advanced Aircraft and Glass Cockpit instruction since 2001. Currently, he also flies the Airbus A-320 series for an international airline and holds six turbine aircraft type ratings. Matt is one of less than 30 instructors in the world to have earned the Master CFI designation six consecutive times. He can be reached at matt@progaviation.com or (414) 339-4990.*



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