

# Flight Following

## A *SafeAir1* Safety Series Article

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By  
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**F**light Following, offered by Air Traffic Control facilities, is one of the best values available to the VFR pilot. This service is not well understood by many recreational and low time pilots who could benefit significantly. This article will address why you might want to obtain flight following and how to confidently and efficiently use it.

### Why use Flight Following?

**T**o reduce your risk of a mid-air collision. Some light aircraft incorporate large “bubble” style canopies offering outstanding visibility, such as the RV series. Unfortunately, all aircraft have structures (like wings) that restrict visibility, inhibiting a pilots ability to acquire traffic with even the best scanning techniques. Flight following offers you a set of electronic eyes to assist in locating and avoiding potentially hazardous traffic. While it won’t eliminate, OR EVEN REDUCE, your responsibility to “see and avoid”, traffic advisories are extremely useful to the VFR pilot. During periods of reduced visibility or even on CAVU days when looking directly into the sun, flight following may help you find the traffic before it finds you. At night, aircraft below are masked by the surface lights making it difficult to acquire visual contact. If the traffic below happens to be climbing, things could get exciting. Listening to other aircraft will draw a picture of what the rides and weather conditions are like around you. As a side benefit, flight following provides communications experience with Air Traffic Control (ATC). If you’re a VFR pilot looking forward to an instrument ticket, gaining confidence and experience behind the microphone will increase the enjoyment and productivity of your IFR training flights.

**O**kay, so you buy into the idea that flight following may enhance your VFR operations. Let’s look at what services are actually being provided. While receiving flight following ATC will issue traffic advisories and safety alerts, broadcast newly issued airmets, sigmets, and pireps within the controller’s jurisdiction, and be immediately available should an emergency arise. But wait, there’s more icing on this cake! ATC would likely suggest a turn before you “plow” through a TFR. As you can see there are a number of safety related benefits to using flight following and it might help keep your “ticket” clean. This is probably a good place to note that controllers are not obligated to provide the service; it’s available as “workload permits”. Also, the service may not be available in some areas/altitudes because, believe it or not, ATC radar can’t see everywhere! Radar is “line of sight” technology, so consider these limitations when flying at low altitudes (AGL) or in mountainous terrain and keep scanning for traffic.

So if Flight Following is almost as good as watching Patty Wagstaff dance in the sky, why don't more pilots take advantage of this service? The world of ATC can move at a rapid pace and ATC phraseology is a language all its own. It can be intimidating to those with little experience or lacking proficiency. It's hard to imagine, but *while airborne*, pilots prefer to blend in and not draw attention to themselves! (I'll continue while you dust yourself off from the fall.) Being "Pilot in Command" and stumbling over phraseology doesn't instill confidence. It's like driving 20 feet off the No.1 tee box. However, with a little planning and practice you'll improve rapidly and your anxieties will quickly dissipate. Before long we'll have another *Sky King* in the system. Many controllers enjoy working the low altitude sectors because they're pilots, too. This should be of no surprise since an interest in aviation is why many chose ATC as a career. I hope this is coming across loud and clear. A lot of the folks on the other side of the microphone would love to be flying with you, either in the airplane or the hangar. So relax, chances are you're among friends.

### **How do I initiate Flight Following?**

The service is easy to "pick up" but there are a few techniques that will help prepare you to make the request, improve system efficiency, and derive the most benefit. Breaking the procedure down into individual steps makes it easy to learn. Read through the sequence a time or two and work through a couple of mock scenarios. If able, fly with a pilot experienced in using flight following. Review the steps and try it again, perhaps on your own?

### **We'll start by picking up flight following once airborne.**

1. Determine the controlling facility and frequency for your location. You can obtain this information by using:
  - ❑ GPS – Many GPS data bases contain frequency information
  - ❑ Airport Facility Directory (aka "Green Book")
  - ❑ Flight Guide, AOPA Airport Directory, etc.
  - ❑ Terminal and sectional charts (offer limited use)
  - ❑ Is there a control tower nearby? You could ask them for a frequency.
  - ❑ Flight Service Station – See the legend on your sectional charts to determine FSS frequencies. They can get you an ATC frequency for your location.
2. Think about your position in reference to "things aviation". Radar scopes typically display airports, VOR's, TACAN's, VORTACs, NDBs, victor airways, intersections, and VFR checkpoints depicted on sectional charts. (See Position Note in Appendix A for additional information.)
3. Contact the controlling facility.
  - ❑ Make the initial contact short and direct. Example: "Chicago Center, N12345, Request" (See Contact Note in Appendix A for additional information)

- The controller will do one of the following:
  - i. Inform you that services cannot be provide due to work load. This may be followed by, “check back in 10 minutes”.
  - ii. But let’s be optimistic and look for the controller to say, “N12345, go ahead with your request”.

- Now it’s your time to shine! Be ready with the following:

1. Call sign (N12345)
2. Aircraft type and equipment suffix (see Appendix C)
3. Position
4. Altitude (If not level, state altitude leaving and altitude climbing or descending to)
5. Request (flight following)
6. State your destination and route of flight if other than direct. (See Routing Note in Appendix A)

- Here’s what the exchange might sound like:

**Pilot:** “Chicago Center, N12345, Request.”

**Controller:** “N12345, Chicago Center, Go ahead.”

**Pilot:** “N12345, RV6 slant Golf, 25 miles west of Bradford, out of 6,200 for 6,500, request flight following to Denver Centennial.”

4. You will be assigned a code to squawk. It’s not a requirement to read back a code assignment but it’s a good idea. The controller immediately knows you got the clearance, can confirm you copied it correctly (read back) and doesn’t have to stare at your data block waiting for confirmation the correct code was dialed in.

- Here’s what the exchange might sound like:

**Controller:** “N12345, reset transponder, squawk 3-3-2-7.”

**Pilot:** “N12345 squawking 3-3-2-7.” (Optional: Place code 3-3-2-7 in your transponder and say nothing.) Note: Don’t ident unless specifically asked to do so.

5. Depending on your location and altitude you should soon be radar identified. Once identified, you are “in the system” and will receive traffic advisories and safety alerts as long as radar contact is maintained. Traffic advisories are self explanatory and Safety Alerts are issued when, in the controllers estimation, targets are likely to merge and a collision hazard may exist. When feasible, the controller will issue an alternate course of action. If an alternate course of action is given, the transmission will end with the word, “IMMEDIATELY”! Safety Alerts are also issued for terrain and obstruction avoidance.

- Here’s a typical exchange:

**Controller:** “N12345, radar contact 28 miles west of Bradford, Mode C indicates 6,300, Bradford altimeter 2992”

**Pilot:** “N12345, roger, altimeter 2992.”

**Controller:** “N345, traffic 11 o’clock, 8 miles, opposite direction, altitude indicates 6,600.

**Pilot:** “N345, roger, we’re looking.”

**Pilot:** “Center, N345, traffic in sight.”

**Center:** “N345, roger”

- Did you raise an eyebrow when you heard, “altitude *indicates* 6,600.”? This means your traffic is VFR, has Mode C, and is not participating (talking to ATC). The point is ATC cannot confirm the Mode C is correct. Take this into consideration when scanning for the traffic. If the traffic doesn’t have Mode C, ATC will state, “altitude is *unknown*”.
- How about a different scenario?

**Controller:** “N345, radar contact 28 miles west of Bradford, Mode C indicates 6,300.”

**Pilot:** “N345, roger.”

**Controller:** “N345, traffic 11 o’clock, 10 miles, opposite direction, altitude indicates 6,600, unverified.”

**Pilot:** “N345, roger, we’re looking.”

**Controller:** “N345, SAFETY ALERT, traffic 12 o’clock, 2 miles, opposite direction, altitude indicates 6,500, advise you turn right IMMEDIATELY.”

**Pilot:** (nervously) “N345, we’re in the turn.”

**Controller:** “N345, traffic no factor, resume own navigation”

**Pilot:** “N345, turning back direct Centennial and we never saw the traffic.”

- Wow, that sounded close! If you get visual contact with the traffic, let the controller know. Controllers are not comfortable watching two targets merge, so let’em in on the good news. (“N12345, Traffic in sight”) If the controller told you the altitude was unverified or unknown, offer your assessment . (“N12345, Traffic in sight, the altitude looked right” or “N12345, Traffic in sight, he was at our altitude”)
- Suppose the controller issues traffic and you can’t find it. If the situation sounds ugly, don’t hesitate to ask for a turn. Just don’t wait too long to ask.
- Here’s what such an exchange might sound like:

**Controller:** “N345, traffic 11 o’clock, 10 miles, opposite direction, altitude indicates 6,600.”

**Pilot:** “N345, roger, we’re looking.”

**Controller:** “N345, traffic 12 o’clock, 3 miles, opposite direction, altitude indicates 6,500.”

**Pilot:** “N345, traffic not in sight, we’d like a turn.”

**Controller:** “N345, advise you turn 30 degrees right.”

**Pilot:** “N345, turning 30 degrees right.”

**Controller:** “N345, traffic no factor, resume own navigation.”

**Pilot:** “N345, we’re turning back direct Centennial, we never saw the traffic.”

- “*Advise* you turn 30 degrees right”, *Advise?* Remember, VFR aircraft can fly at low altitudes (AGL) with few restrictions. It is the responsibility of the pilot to maintain safe distances from clouds, terrain, and obstructions. “*Advise*”, is how controllers legally protect themselves from turning a VFR aircraft into clouds, obstructions, or terrain. “*Suggest*” is frequently used in the same manner.
6. What if ATC says, “Radar contact lost”? You should acknowledge (“N12345, Roger”) and leave the transponder alone. You might want to pay a little more attention looking out the windows. If the controller can’t see you (radar contact lost) they most likely won’t see threatening traffic, either. (See Radar Coverage Note in Appendix A)
7. You’ve been receiving traffic advisories for quite some time when ATC says, “N12345, Radar services terminated, contact Kansas City Center 127.85.” What’s that all about?
- Did I mention many FAA facilities don’t share radar data? The facility that terminated radar services could see you (they didn’t say radar contact *lost*), but the facility you’re about to enter cannot. Once the receiving facility gets you in radar contact, they’ll radar identify you. Example: “N12345, radar contact 25 miles east of Lufkin, level 8,500”. Pay attention to the location and altitude (cheap mode C check) and verify the target they’re looking at is YOU! If you don’t have mode C, ensure the controller knows your altitude. Proper phraseology accomplishes this when checking on a newly assigned frequency. (“Chicago Center, N12345, level eight thousand”)
  - When transitioning from a radar facility to a non-radar facility you must be notified that radar services will no longer be provided. How does ATC notify you of this? “N12345, *radar services terminated*, contact Texarkanna tower 125.7”. Texarkanna Tower is a non-radar facility, therefore, radar services cannot be provided. The tower should have your flight plan information. “Radar services terminated” doesn’t mean that flight plan processing has stopped, it just means they cannot see you.
  - Notice no one told you to touch your transponder? Except for an emergency, radio failure, etc., never change your transponder unless told to do so or upon landing. A pretty simple rule of thumb.
8. Let’s assume the transmission was, “N12345, radar services terminated, squawk 1-2-0-0, change to advisory frequency approved”. Acknowledge the clearance with,

“N12345, roger, squawking VFR (or 1-2-0-0), good day”. Place the code (1200) in the transponder and change to the appropriate frequency. Example: CTAF

- ❑ Finally, you can touch the transponder! In addition to being told that radar services won't be provided (“radar services terminated”), “squawk 1-2-0-0” is the key that *flight plan processing* has stopped. You're no longer “in the system”. As a rule of thumb, if you're squawking 1200 on initial contact to any ATC facility, they're not going to know anything about you.
  - ❑ What if you weren't even close to your destination when terminated and you want to continue receiving advisories? Why were you removed from the system?
    - a. You may not have a choice if the controller terminated you due to work load. If this is the case, you might look for another frequency along your route of flight and try again down line. If you keep coming up with the same frequency (down line), I suggest you monitor the frequency for 10-15 minutes. If things seem to have settled down, ask again. Regardless of whether you've been terminated, if the frequency is really buzzing, keep your eyes out the windows. There's a tremendous demand for the controller's attention.
    - b. Another reason? You may be entering an area of poor radar coverage. Climbing to a higher altitude may help in some areas and the controller may ask if you're capable of doing so.
9. If you don't want flight following any longer, state one of the following, “Chicago Center, N12345, request termination of radar services.”, “Chicago Center, N12345, we'd like to terminate our flight following.” or “Chicago Center, N345, We'd like to cancel flight following.”

## 10. How do I pick up flight following while on the ground at uncontrolled airports?

- ❑ Obviously, this requires the capability to talk to ATC while on the ground. Your initial contact should be the same as if airborne. When ATC tells you to go ahead, state the elements as discussed in step 3 above. Be sure to clearly state you're on the ground at XYZ airport and when you intend to depart. ATC will provide a code to squawk on departure and a frequency. Once airborne, they'll identify you and you're in the system. (See Change of Plans Note in Appendix A)
- ❑ This is how the exchange might sound:

**Pilot:** “Chicago Center, N12345, request flight following.”

**Controller:** “N12345, Chicago Center, Go ahead.”

**Pilot:** “Chicago Center, N12345, RV6 slant alpha, on the ground at XYZ airport, departing in 3 minutes, cruise altitude 6,500, destination ABC airport.”

**Controller:** “N345, roger, on departure squawk 4-3-5-6, contact Chicago Center this frequency.”

**Pilot:** “N345, squawk 4-3-5-6 on departure, and this frequency.”

**Controller:** “N345, frequency change approved” (to CTAF)

**Pilot:** “N345, roger”

- While operating in the vicinity of an uncontrolled airport, you should be on CTAF. Once clear of the airport environment, switch over to the assigned Chicago Center frequency.

## 11. How do I pick up flight following at tower controlled airports?

- After getting the current ATIS, contact clearance delivery. Inform clearance delivery you're VFR, cruising altitude 5,500, en route to ABC airport, and you'd like to receive flight following. They'll issue a code to squawk and give you the appropriate departure frequency. When ready, switch over to ground and get clearance to taxi to the runway. Conduct normal operations from this point on. When you check on departure frequency following take off, you'll already be “in the system”. Once radar identified, you'll begin receiving radar services.

- After picking up the current ATIS, here's how the exchange might sound:

**Pilot:** “Clearance delivery, N12345.”

**Clearance Delivery:** “N12345, clearance delivery, go ahead.”

**Pilot:** “Clearance, N12345, RV6 slant alpha, cruising altitude 5,500, request flight following to ABC airport”

**Clearance Delivery:** “N12345, roger, maintain VFR at or below 2,500, squawk 4-3-5-6, departure frequency 118.1.

**Pilot:** “N345, VFR at or below 2,500, squawk 4-3-5-6 contact departure on 118.1”

- Contact Ground, get clearance to taxi, then, contact tower for departure clearance. Once airborne, the tower should initiate the conversation. It might sound something like this:

**Tower:** “N12345, Contact departure”

**Pilot:** “N12345, roger”

**Pilot:** (now on 118.1) “Departure, N12345 out of 1,200 for 2,500”

**Departure:** “N12345, radar contact, say requested altitude?”

**Pilot:** “N345, requesting 5,500”

**Departure:** “N345, climb to 5,500, maintain VFR”

**Pilot:** “N345, roger, climbing VFR to 5,500”

- Smaller airports use ground control to carry out the functions of clearance delivery. If this is the case (no clearance delivery frequency listed), contact ground control and make your request.

# Appendix A

## Supporting Notes:

**Position:** If you were instructed to fly directly to the soccer field south of the river, could you find it if you weren't familiar with the area? Where's the river? However, if the controller directed you to fly directly to the XYZ VOR and depart it heading 180, that's pretty easy to do. The geography of the area no longer matters. (Note: the 180 radial off of the XYZ VOR takes you directly over the soccer field, south of the river.) Provide the controller with the same courtesy in return. In the En Route Center environment, such as Chicago Center, sectors may contain thousands of square miles of airspace. Rivers, water towers and chicken coups don't do much to divulge your location to the controller. Using "things aviation" for position reports makes it very easy for the controller to quickly locate and positively identify you.

**Contact:** Initial contacts to ATC facilities should be short and sweet. For example, "Chicago Center, N12345, Request". This technique allows the controller to prioritize transmissions. For example: A pilot keys the mike and immediately requests flight following, stating his position, aircraft type, equipment, altitude leaving, altitude climbing to, destination, how he plans on getting there, what he had for breakfast, what his passenger had for breakfast, how good the hash browns were, and on and on and on... While the frequency is tied up, there's an aircraft approaching the localizer that will fly through it BEFORE the frequency is again available. The same goes for controllers. They shouldn't spew a Rube Goldberg clearance without giving the pilot a chance to grab a pencil and sit up straight. Otherwise, it's likely you're going to get to do it again.

**Routing:** If you depart Chicago Meigs (Let me dream), en route to Dallas/Ft Worth International, life remains simple. Inform the controller of your destination and enjoy the flight. However, if you depart Meigs en route to Wills Point, Texas, you'll have to provide the lat/longs for Wills Point to Chicago Center or a navaid/airport along your route that Chicago Center's computer recognizes, then one that Kansas City Center recognizes, and so on. How do you know which ones will be recognized? That's an article in itself. I recommend having the lat/longs ready. All the ATC facilities handle lat/longs just fine. You might want to sit down for the rest of this. ATC facility data bases contain *most* of the airports, nav aids, and intersections within *that* facilities airspace but will contain only a select few outside their jurisdiction. For example: Chicago Center's data processing computer is capable of processing flight plans to Dallas/Ft Worth. The lat/longs for DFW have been adapted to their [Chicago Center] database because of the high volume of traffic between Chicago and Dallas/Ft Worth. This directs flight plan information to the appropriate sectors and facilities along the route of flight. However, Chicago Center would not be capable of processing a flight plan to Wills Point. Being a "low volume" airport for Chicago area departures, it [Wills Point] most likely hasn't been adapted to the data base. As a result, your flight information won't get

processed to the appropriate sector. Your handheld GPS has a larger aviation data base than Chicago's En Route Air Traffic Control Center!

**Check In:** When checking in on a newly assigned frequency, always state the facility, your *full call sign*, altitude (if not in level flight), and altitude climbing or descending to. Example: "Chicago Center, N12345, leaving 6,700 for 8,500" or "Chicago Center, N12345, 8,500". Abbreviated call signs (N345) can be used in subsequent transmissions. Remember, when checking in on a new frequency you are verifying with the controller that *two way* radio communications exist. If you check in as described above and the controller acknowledges you with your call sign and an altimeter setting, we're half-way there. But if you don't respond the controller doesn't know if two way communications have been established. Chances are, the controller will repeat the transmission until you respond with, "N12345, Altimeter, 2-9-9-2" or "N12345, Roger".

**Radar Coverage:** ATC facilities do not have complete radar coverage in the United States. Remember, radar is a "line of sight" technology. Terrain, obstructions, size and reflectivity of target, distance from the antenna, and atmospheric conditions will impact radar performance. Since ATC radar "paints" approximately once every six to ten seconds, depending on the facility, it's possible for the "picture" to change drastically between radar "hits" and ATC transmissions. For instance, if a pair of 180 mile-per-hour aircraft were closing head-on, in ten seconds they will be one mile closer to each other. That's a closure rate of 6 miles per minute! Can you see an RV-4 six miles away? I'll give you a minute to think about it. Another common scenario to ponder. Traffic at your altitude is traveling north. You are traveling east. Both aircraft are similar speed and it appears to the controller you will cross a mile behind the north bound traffic. Targets do not appear likely to merge, so a safety alert is not issued. Then the north bound traffic turns hard to the west and is now head on! If the controller is "prying apart" a couple airplanes on the other side of the sector, he or she may not see the traffic turn. Again, it's the pilots responsibility to see and avoid. Keep traffic in sight until it is clear. Flight following supplements your traffic scan, it does not replace it.

**Change of Plans:** If you decide not to depart, contact ATC and let them know. You can also contact flight service, tell them you decided not to depart and ask them to relay the information to ATC. If you fail to contact ATC, they're going to assume the worst and activate search and rescue procedures!

**So Long, Farewell:** If you choose to terminate flight following, don't disappear without saying goodbye and GET CONFIRMATION. Make sure the controller acknowledges, and terminates your services. By now, you should know not to touch the transponder until told to do so. In post 9-11, ATC takes lost radar and communications very seriously. Expect them to activate search and rescue. They will assume the worst and that's to our benefit if we have a bad day (crunch).

**"Flight Plan":** Throughout the body of this article I have referred to "flight plan" information. When dealing with ATC (a control facility) a VFR flight plans contain information required to process to the next sector or facility. I'm speaking of call sign, type aircraft, speed, altitude, route, code, etc. ATC doesn't know who the pilot is, how much gas you've got, or how many passengers are onboard. A VFR flight plan *filed with*

*flight service* (not a control facility) is a completely different kind of flight plan. Sure, they get the same information as ATC, and then some, but for different reasons. Flight Service is responsible for activating search and rescue for overdue VFR aircraft. This may seem confusing at first, but it really makes good sense. Flight Service doesn't know if you'll be in contact with an ATC facility. In many cases, the pilot has no obligation to do so. You're VFR, right? Maybe you'll just enjoy the sound of the radial this morning? If you crash, who's going to know? If you're receiving flight following into an unattended, remote airport, ATC would terminate your radar services and switch you over to CTAF. If you were to crash on short final, ATC wouldn't know. ATC, in this case, assumes you landed safely. Flight Service, on the other hand, would be looking for you thirty minutes after your ETA. Although ATC and Flight Service communicate, they serve completely separate functions. ATC does not close VFR flight plans filed with Flight Service. That's for you to do when you are safely on the ground!

## **Appendix B**

### **Correct Cruising Altitude for Direction of Flight**

Excerpts from FAR 91.159: Except while holding in a holding pattern of 2 minutes or less, or while turning, each person operating an aircraft under VFR in level cruising flight *more than 3000 feet above the surface* shall maintain the appropriate altitude prescribed below unless otherwise authorized by ATC.

When operating below 18,000 feet MSL:

- ❑ On a magnetic course of 0 degrees through 179 degrees, any odd thousand foot MSL altitude +500. (For example: 3,500, 5,500, 7,500)
- ❑ On a magnetic course of 180 degrees through 359 degrees, any even thousand foot MSL altitude +500. (For example: 4,500, 6,500, 8,500)

## **Appendix C**

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### **Aircraft Equipment Suffixes**

Note: Use only one. Example: C182/G

Suffix	Aircraft Equipment Suffixes
	No DME
/X	No Transponder

/T	Transponder with no Mode C
/U	Transponder with Mode C
	<b>DME</b>
/D	No Transponder
/B	Transponder with no Mode C
/A	Transponder with Mode C
	<b>TACAN Only</b>
/M	No Transponder
/N	Transponder with no Mode C
/P	Transponder with Mode C
	<b>Area Navigation (RNAV)</b>
/Y	Loran, VOR/DME, or INS with no Transponder
/C	Loran, VOR/DME, or INS, Transponder with no Mode C
/I	Loran, VOR/DME, or INS, Transponder with Mode C
	<b>Advanced RNAV with Transponder and Mode C</b> (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.)
/E	Dual FMS (Flight Management System) with en route, terminal, and approach capability. Required equipment includes an electronic map display.
/F	Single FMS with en route, terminal and approach capability...
/G	GPS/Global Navigation Satellite System (GNSS) equipped aircraft with en route and terminal capability.
/R	Required Navigation Performance (Denotes capability to operate in RNP designated airspace and routes.)
/W	Reduced Vertical Separation Minimum (RVSM)
/Q	RNP and RVSM (Indicates approval for application of RNP and RVSM separation standards.) It should be noted that “/Q” is for automation purposes only and will not be filed by system users. FAA processors will convert the combination of /R + /W = /Q.

## Appendix D

### Misc. Nuggets

- Monitor the frequency for 5-10 seconds before keying up. It's unprofessional to “flip the switch” and start talking. You'll block another transmission or be right between a clearance issued and the readback. Each sector has at least two

- frequencies (UHF/VHF). Some may have six or more. You hear only transmissions on your frequency, but the controller receives/transmits on multiple frequencies simultaneously. Attention and judicious timing will usually prevent you from stepping on others.
- ❑ If you check on frequency with no response, allow at least a minute to pass before making a second attempt and returning to the previous frequency. Even though you didn't get a reply doesn't mean ATC didn't hear you. The controller may be issuing a clearance or coordinating via telephone line.
  - ❑ Many pilots check on frequency and state their assigned code. This is not necessary. ("Chicago Center, N12345, Squawking 3-3-4-6") The code is discreet. (No one else will be assigned the same code) ATC knows the code you're assigned, they gave it to you. You shouldn't need to transmit your code assignment unless you're reading it back following its assignment (which is optional) or ATC specifically asks what you're squawking. The latter usually means a miscommunication has occurred and you're on the wrong code or your transponder is up to its old tricks again and is showing something different than what you have dialed in.
  - ❑ Once "in the system", always state your altitude on initial check in. There is no need to state your position since they're "painting you" with every sweep of the antenna, ATC knows your location. Exception: If you've been told, "radar services terminated" or "radar contact lost" then it is acceptable to state your position when checking on the newly assigned frequency.
  - ❑ If you're landing at an uncontrolled airport, notify ATC when you see the airport. "N12345 has the field in sight". ATC will usually terminate radar services, assuming no observed conflicting traffic, and switch you over to advisory frequency. This allows timely check in on CTAF.
  - ❑ If you're landing at a towered airport, notify ATC when you see the airport. Assuming no conflicting traffic, ATC will terminate services and switch you over to tower. This gives sufficient time to the tower to plan your arrival sequence with other traffic in the pattern.
  - ❑ Many pilots confuse "Roger" with "Affirmative". "Roger" does not mean yes, it means I heard you.
  - ❑ You must listen and prepare your passengers to do the same. If you request ATC services, cockpit communications must change. I'm not suggesting a sterile cockpit environment but if ATC tries to issue traffic or a safety alert, it's imperative to listen up. Make sure "Uncle Billy" knows when to squelch the stories.
  - ❑ If your conversations with ATC don't seem to "flow" smoothly or in the right sequence, don't get too concerned. The whole idea is for the maximum amount of information to be accurately passed using the minimum amount of verbiage. Part of your discomfort could be the controller. Unfortunately, there are some with lousy phraseology and table manners. Over time you'll learn to "roll with the punches" when out of the ordinary situations arise.
  - ❑ If you have a handheld radio or base station, spend some time listening to the communications at a local towered airport. Pick a busy one that works a lot of general aviation. If able, scan clearance delivery, ground, and local. This is one of the best ways to learn and if you're a nerd like me, it can be entertaining.

- ❑ As stated previously, plan on using flight following on a local or short cross country flight. You can “fill in the blanks” before you leave the house. Get a couple of frequencies along your route in case the first one is too busy to provide the service. The process simply reverses for the flight home and don’t forget to change to a correct altitude for your direction of flight.
- ❑ Affordable technology now exists for light aircraft which detects and alerts pilots of threatening transponder equipped traffic. Do some research and see if one of these black boxes is right for you.
- ❑ To learn more about the services provided and the different levels of services available, see the Airman’s Information Manual (AIM - Radar Traffic Information Service / Chapter 4-1-14)
- ❑ Be safe and enjoy the freedom of flight!