



## Avoiding Pilot Deviations

Pilot deviations can occur in several different ways. Airborne deviations can result when pilots stray from an assigned, heading, altitude, or instrument procedure, or if they penetrate controlled or restricted airspace without ATC clearance. Ground deviations can happen while taxiing, taking off, or landing without clearance, deviating from an assigned taxi route, or failing to hold short of an assigned clearance limit. To avoid pilot deviations, follow these steps.

### Step 1: Plan Each Flight

You may have flown the route many times before, but conditions can change rapidly, like a pop-up temporary flight restriction (TFR). Before each flight, take a few minutes to:

- ◆ *Confirm that you have the latest data. Either download the current charts and TFR data to your tablet and/or on-board navigation system, or make sure you have the necessary FAA sectional and terminal charts. Log a briefing with Flight Service or DUATs before takeoff, which will show that you complied with your PIC responsibility to acquire all relevant information before flight.*
- ◆ *Consider what types of airspace you will be flying through, what clearances you will need, and what you will do if clearance is not granted.*
- ◆ *Request flight following or file an IFR flight plan. This ensures that another set of eyes will monitor your flight. The collision avoidance benefit is obvious, but you will also gain real-time information about TFRs.*

### Step 2: Talk & Squawk

Proper communication with ATC has its benefits. Flight following often makes the controller's job easier because they can better integrate VFR and IFR traffic. Controllers also have the latest local TFR information. Here are some tips:

- ◆ *Note all altitude, heading, speed, and procedure assignments and clearances. Do this on a scratch pad or in your flight management system. Make the note, then read it back.*
- ◆ *Read back clearances and instructions exactly as received, including your call sign.*
- ◆ *Let "George" do it. If you have an autopilot with altitude and heading hold capability, then use it to make sure you do not bust an ATC assignment. However, an autopilot malfunction is not an excuse for a pilot deviation. As PIC you are responsible for your aircraft at all times. Continually monitor the altitude and heading.*
- ◆ *Have a Plan B. VFR advisory service (flight following) is dependent on controller workload, so it's a good idea to have an alternate plan in case advisories are unavailable.*



Avoid Automation Bias

## Step 3: Give Yourself Some Room

Whether it's integrated into a glass cockpit, a hand-held device, or part of a tablet computer, everyone is flying with GPS. There has never been a time when more information has been available to assist us with our navigation duties.

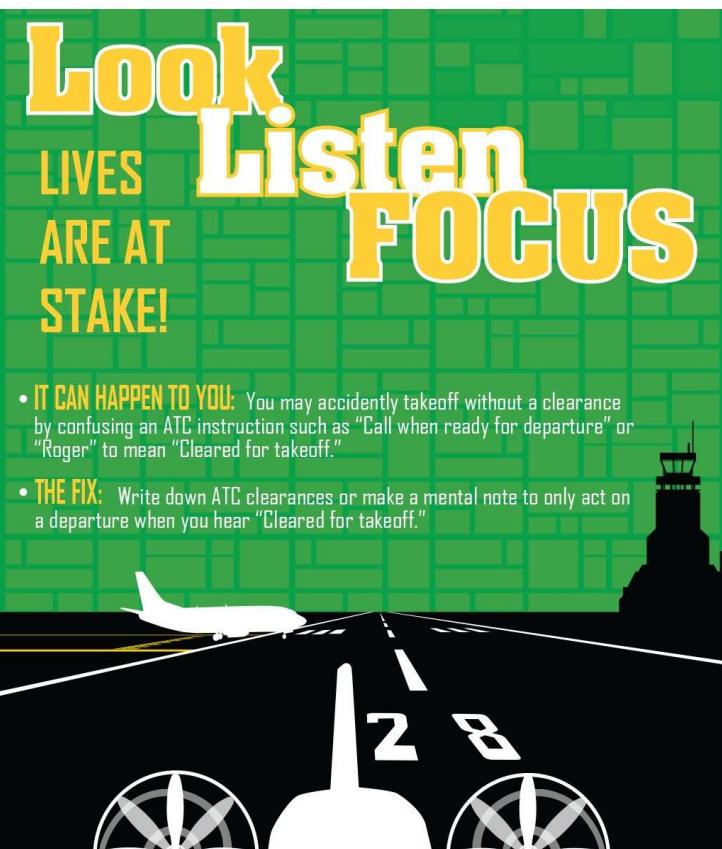
GPS is usually more precise than ATC radar. Using your GPS to fly up to and along the line of the airspace you are trying to avoid could result in a pilot deviation because ATC radar may show you within the restricted airspace. You may be able to prove that you were not at fault, but you would need to produce a track from your navigation system. FAA inspectors prefer not to meet you under these conditions. Here are some tips:

- ◆ *Horizontally, fly at least a mile outside of any airspace you are trying to avoid. A minor distraction, e.g., answering a passenger's question or changing a frequency, can put you inside a TFR boundary if not flying at a safe distance alongside.*
- ◆ *Vertically, fly at least 500 feet above or below airspace you are trying to avoid. Also, think about "talking and squawking" instead of trying to sneak under that Class C airspace.*
- ◆ *Timing is never exact. If you know a TFR will become active at 0800, it's not a good idea to operate there at 0755. Don't plan on operating in a TFR area immediately after it's scheduled to close. Always confirm the TFR has expired before operating in the airspace that was restricted.*

## Step 4: Stay Alert During Ground Ops

Pilot deviations can and frequently do occur on the ground. Many airborne pilot deviation avoidance strategies and tactics work on the ground as well. Here are a few suggestions for avoiding runway incursions:

- ◆ *Plan your route from chocks to chocks. Consult an airport diagram before and during taxi operations.*
- ◆ *Read back all clearance instructions. Make sure you understand what you have been*



*cleared to do before taxiing. If there is any doubt, ask for clarification.*

- ◆ *Ask for progressive taxi instructions. This is an excellent way to make sure that you are complying with your taxi clearance. It is also extremely useful at unfamiliar airports.*
- ◆ *Maintain a sterile cockpit. Conversation must be restricted to taxi operations when maneuvering on an airport. There should be no unnecessary conversations or duties while taxiing. All focus should be on the taxi route, signs and markings, and listening to ATC transmissions. Do not set radio frequencies while moving on the ground.*
- ◆ *Make note of any hotspots. Confirm all taxiways that are closed by NOTAMs.*

## Runway Safety Resources

Let's Take Minute for Safety Video— Pilot Deviations  
[youtu.be/auDzIKEMaAQ](https://youtu.be/auDzIKEMaAQ)

Runway Excursions Support Tool  
[RunwayExcursions.FAA.gov](https://RunwayExcursions.FAA.gov)

Runway Safety Webpage  
[FAA.gov/airports/runway\\_safety](https://FAA.gov/airports/runway_safety)