

Pilot Deviations

1.00 Causes of Pilot Deviations and Planning Ahead to Avoid Them

Deviations can happen, but steps can be taken to avoid them.

The ATC-Pilot relationship is a two-way street.

What are the types and numbers of airborne pilot deviations?

2.00 Types and Numbers of Airborne Pilot Deviations

2.04 The Four Categories: VFR

2.04 Airspace Violations

Most common

Accounts for 75% of all VFR deviations

Poor route planning may lead to an airspace bust

Take vertical and lateral boundaries into account when planning.

Becoming distracted may lead to an airspace bust

Get comfortable in all types of airspace – fly in them and don't avoid them

[ASRA Anatomy Video - Anatomy of an Airspace Bust](#)

2.08 VFR into IMC

2nd most common

This is the deadliest weather - related accident in GA

[Accident Case Study: Cross Country Crisis](#)

CFI supervision during solo flights helps reduce this during training.

CFIs need to emphasize during training to make the “severity” of this deviation stick.

2.10 Low-Level Flight

3rd most common

“Buzzing” is the biggest concern here

2.11 Inoperative Equipment

Typically discovered in a FAA ramp check situation rather than self-reporting.

Good instruction and more complete pilot knowledge can reduce these deviations.

2.12 A Quick Aside

GA pilot deviations account for over 80% of all runway incursions

2.14 The Four Categories: IFR

2.15 Altitude Deviations

Most common

Accounts for 65% of all IFR deviations

300 foot deviation from assigned altitude may elicit a call from ATC - staying within this altitude excursion will keep you out of trouble.

Overshoots, Undershoots, Excursions

2.17 Course Deviations

2nd most common

Attention issues, workload management and cockpit habits play a part in this one.

Ensure GPS databases are current

GPS receivers will only display what you tell it to display – check your work to ensure it is what you were cleared for.

GPS course deviations in IFR flight have become more frequent – pilots are not as familiar with their equipment as they should be.

2.19 Airspeed Violations

3rd most common

More common for commercial aircraft than GA aircraft

2.20 Compulsory Reporting Points

Being unaccustomed to making these reports can lead to the pilot forgetting they need to be made.

Devise a way to remember when reports need to be made.

IFR Position Report:

Call sign

Identification of the position

Time over the reporting point in UTC

Altitude or flight level

Type of flight plan or flight itinerary field

Name of the next reporting point and the ETA over that point in UTC

Name only of the next succeeding reporting point along the route of flight

Additional information requested by ATC or deemed necessary by the pilot

2.22 [Interview with Kathy Yodice Video](#)

3.00 Preflight and Flight Planning

3.01 Strategy #1: Careful, Unhurried Planning

Set the example as the instructor

3.07 Write It Down, Read It Back, Dial It In

3.09 Automation Training

Know its capabilities

3.10 Verbal Callouts

3.11 Low-Tech and DIY

3.12 Sterile Cockpit

Practice sterile cockpit procedures in GA aircraft

3.14 Good Habits

Establish good habits patterns

3.15 [Kathy Yodice Interview: Video 2](#)

3.19 Mode Awareness

Be aware of the GPS mode

3.21 Tips to Live By

Stop the aircraft before copying clearances, programming the GPS, etc. unless absolutely required.

3.22 More Tips

Be ready, with current charts in hand, before copying new clearances.

Ask for clarification from ATC if necessary

4.00 Preventing VFR Pilot Deviations

4.10 Caution: User Error

Electronic Flight Bags (EFB) - more common in today's GA cockpits

Excellent tools, but caution is warranted.

4.11 [Kathy Yodice Interview: Video 3](#)

4.12 [Kathy Yodice Interview: Video 4](#)

4.13 VFR in IMC: Introduction

Limited skills training as a student pilot don't equip them to operate in IMC conditions - these are emergency situations

4.16 [Flying Blind Video](#)

4.18 180 Out

Possibly the best option is a 180 turn

4.19 VFR into IMC: Scenarios

Scenario training can make a lasting impression

4.20 Training Minimums

Legal vs. safe illustration

4.21 Weather Decisions

Teach Go/No-Go decision making

4.22 Low-Level Flying

There's a time and place for everything

Teach aerodynamics and flight characteristics for low-altitude maneuvering and possibly slow-speed flight.

Teach considerations for an emergency situation that may result in a forced landing.

4.27 Inoperative Equipment

Use training scenarios to teach this area to a higher level of understanding and application

CFIs need to be an example and hold the line

5.00 ASRS Report Case Studies

CFI can search specific criteria to yield examples to use in training.

5.06 [ASRS Waypoint video: The Case of the Missing Waypoint](#)

6.00 Keeping a Mistake from Becoming a Violation

Altitude Deviations

6.03 Prompt, Smooth Corrections

More than 300 feet – smoothly, but promptly correct to the assigned altitude and advise ATC that you are correcting (if they ask)

6.04 Mitigate the Effects

Use an altitude callout as a technique (e.g., 1,000 feet to go calls)

6.05 Calm and Polite

Stay calm and be polite on the radios

6.06 Keep It Brief

A brief, non-specific apology tacked on to your next radio call is probably a good idea.

6.07 [Kathy Yodice Interview: Video 5](#)

6.09 Training in Progress

A “training in progress” call may be in order to alert ATC.

6.10 Context

CFIs must ensure all endorsements are in proper order to protect them from FAA certificate action.

6.11 Mitigating Factors

Make sure ATC knows their instructions were “stepped on” and you need to repeat them.

6.13 Collect Your Thoughts

If you get a “call this number” from ATC:

Collect your thoughts

Take down some notes of what occurred

Be polite and respectful on the phone

6.14 [Kathy Yodice Interview: Video 6](#)

6.16 [Kathy Yodice Interview: Video 7](#)

6.17 Conclusion

If you think you have committed a deviation:

Don't change your squawk or conceal aircraft information

Don't lie to ATC

Don't argue with ATC

File a NASA Aviation Safety Reporting System form if you are inadvertently involved, or suspect you are involved in a pilot deviation. Doing so can help you avoid penalties from the FAA.

Pilot deviations don't need to happen. By guarding ourselves against poor technique, inattention, or failure to plan properly, we can easily prevent ourselves (and our students) from committing a pilot deviation in the future.