



Runway Safety

Runway incursions continue to occur at the rate of more than 1,200 per year — that averages more three a day! Because incursions have the potential to cause serious accidents, their prevention continues to be a focus of FAA and the FAA Safety Team (FAASTeam). Let’s have a look at some tips and best practices that can help you avoid incursions and improve your overall runway safety.

What is a Runway Incursion?

According to FAA Order 7050.1, Runway Safety Program, a runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft.

In fiscal year 2014, there were 1,264 runway incursions in the United States. Although vehicles, pedestrians, and air traffic controllers are responsible for some incursions, pilot deviations are cited in more than 60% of all incursion events. If we drill down further, we’ll also see that incursions are largely a general aviation problem with more than half occurring in GA operations conducted under 14 CFR part 91.

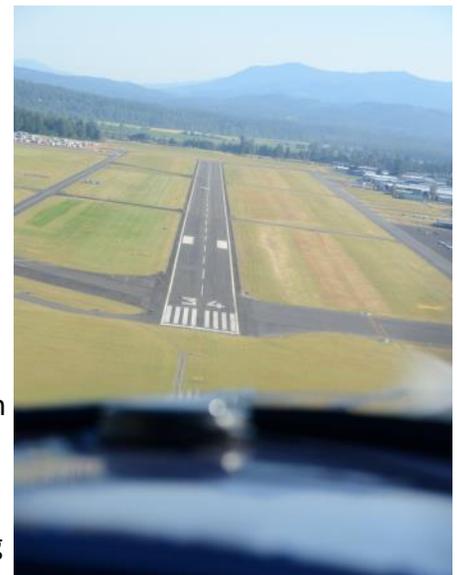
So why such a high rate of incidence for GA? There are several factors that lead to runway incursions, including lack of situational awareness (unfamiliar airport or airport markings), distractions (chatty passengers or being heads down with an

electronic device), or fatigue (physical or mental). When compared to airline operations, there are also some factors that put GA at a disadvantage. Pilots aboard passenger aircraft typically have the benefit of multiple crew members, a higher vantage point, and greater proficiency.

What Can We Do Better?

A good defense against all of these factors: better planning and preparation. We all do a pretty good job of flight planning: route, weather, fuel, NOTAMS, etc. But how many people spend

significant time making a detailed plan for their taxi routes from the ramp to the departure runway, and from the landing runway to the parking ramp? This simple step can reap enormous benefits when it comes to improving your situational awareness. If in doubt about your route or where you



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are, **STOP!** Don't be embarrassed to ask questions of the controller. It's okay to ask for directions or for progressive taxi instructions if you are not familiar with the airport or route of taxi that has been assigned.

Hold Up!

By far one of the most critical markings on an airport is the runway holding position marking (four yellow stripes — two solid, two dashed). Cross it without the proper clearance from air traffic control and not only will you receive a terse call from the tower, but you may easily put yourself in grave danger with conflicting traffic.

To help prevent this type of runway incursion, the FAA developed an enhanced taxiway centerline that helps alert pilots that they are approaching a runway. It consists of a series of staggered dashed lines on either side of the yellow taxiway centerline 150 feet from the runway holding position marking. You may also see surface painted holding position markings (red background and white inscription) that are designed to supplement those ever-important hold short lines. The enhanced taxiway centerlines are required at part 139 airports but are becoming a more common sight at many smaller GA airports.

Know the Hot Spots

A hot spot is defined as a location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention is necessary. It is typically a complex or confusing taxiway/taxiway or taxiway/

Did you know... the letters "I" and "O" are not used to designate taxiways because they could be mistaken for a runway number.

runway Intersection. By identifying hot spots, it is easier for you to plan the safest possible path of movement in and around that airport. You can find hot spots by checking: airport diagrams, the Airport/Facility Directory (A/FD), and instrument approach books. Pay careful attention to the taxi instructions ATC issues as well. Expectation bias with directions you think you will hear can often steer pilots down a dangerous path. Having the airport diagram in view can help, especially if your instructions get changed.

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Although technology is an important part of advancing runway safety, education awareness and outreach remain the cornerstone of promoting safe surface operations. In line with that education effort are the many informational tools available for pilots and operators on FAA's Office of Runway Safety website at www.faa.gov/airports/runway_safety.

Resources

Advisory Circular 91-73B - Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations

<http://go.usa.gov/3qbxz>

Pilot's Handbook of Aeronautical Knowledge — Appendix 1, Runway Incursion Avoidance

<http://go.usa.gov/3qTtF>

FAA Runway Safety Challenge

www.faa.gov/airports/runway_safety/eQuiz/

