Runway Safety

International Council of Aircraft Owner and Pilot Associations

Perspective

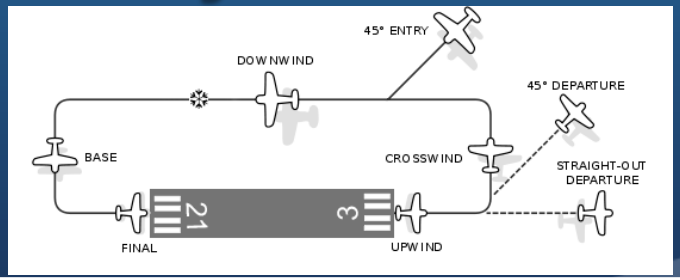
General aviation comprises more than --

- 100,000 landing areas
- 350,000 aircraft
- 1.5 million pilots

- **IAOPA represents –**
  - 450,000 pilot/owners in 69 States

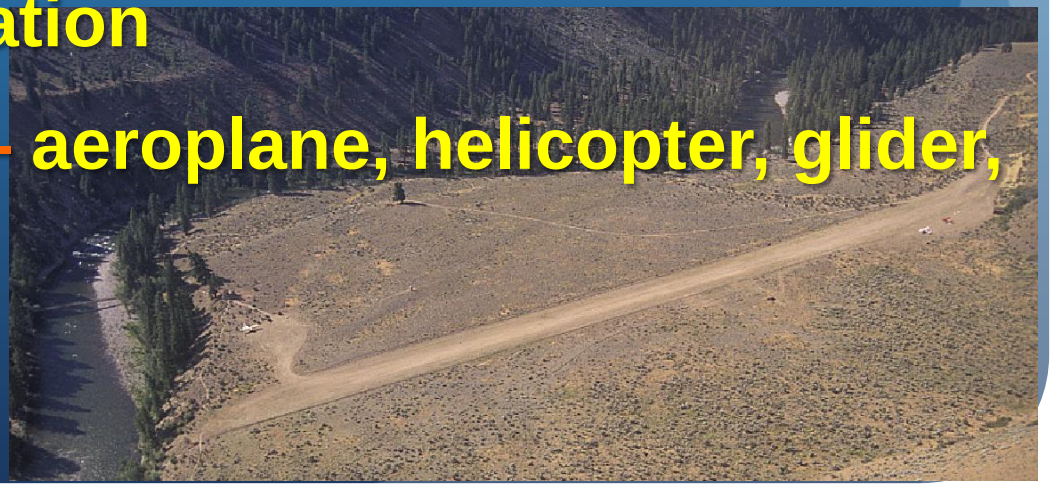
Are They Really Uncontrolled?

- Non-towered, perhaps self-control…
- Standard procedures are common
  - Ground
  - Flight
  - Communications
- Training is key.



Environment

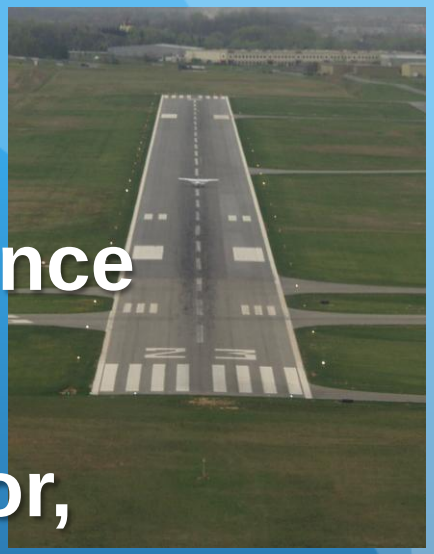
- **Location** – mountains, deserts, surrounding obstructions
- **Small** – runway length and width
- **Irregular Surface** – macadam, grass, gravel, dirt
- **Non-standard design** - construction, signage, facilities
- **Certification** – normally uncertified by any government organization
- **Multiple operations** – aeroplane, helicopter, glider, ultralight.



Problems

- **Taxi** – few charts, un/poorly marked routes, obstructions
- **Takeoff** – can't see entire pattern, no communications, multiple operations
- **Landings** – Heavy traffic, non-standard patterns, no communications, multi-ops
- **IFR/VFR mix** – instrument approach vs. VFR pattern
- **Airport design/maintenance** – inadequate
- **Proficiency & Experience**
- **Discipline ….**

...Consequences



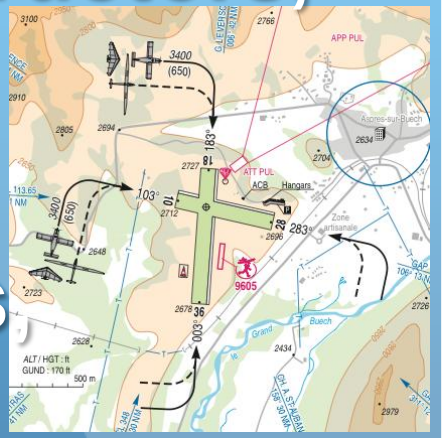
- **Runway incursions --** self-clearance reduces frequency/severity
- **Excursions, overruns** – pilot error, wind/weather, airport design
- **Collisions on the ground** – taxiing, vehicles, obstacles
- **Mid-Air Collisions –** usually on approach or on runway

Controlled (towered) Airports

- Big vs Little – we choose *not to* go to large airports
- Sequencing difficult
- Strange environment
- Single-pilot
- Hazards
  - Wake turbulence
  - Jet wake
  - Too small to see?.

Solutions

Awareness – pilots, flight instructors, controllers, airport operators, regulators



Education – Pilots, controllers regulators

Initial and recurrent training – pilots and flight instructors

Safety refreshers – States, flight training organizations, safety groups.

Continuing Pilot Education

- States -- Canada, USA, Australia, UK, New Zealand, EASA
- Flight training organizations
- Foundations – AOPA Air Safety Institute
- Associations – AOPAs
- Periodicals.

Operations at Nontowered Airports

Nontowered airports—those not served by an operating air traffic control (ATC) tower—are much more common than towered fields. In fact, nearly 20,000 airports in the United States are nontowered, compared to approximately 500 that have towers.

Millions of safe operations in all types of aircraft are conducted at nontowered airports in a variety of weather conditions. The process works because pilots put safety first and use recommended procedures.

A word about procedure: There are several sources of information that explain official FAA-recommended procedures at nontowered airports. FAR 91.113 cites basic right-of-way rules, and FARs 91.126 and 91.127 establish traffic-flow rules at nontowered airports. The *Aeronautical Information Manual (AIM)* and FAA Advisory Circular 90-66A expand on the regulations. Together, these documents define procedures for nontowered flight operations.

Regulations and procedures can't cover every conceivable situation, though, and the FAA has wisely avoided imposing rigid operating regulations at nontowered airports. What is appropriate at one airport may not work at the next. Some airports have special operating rules due to obstacles or hazards, while other rules may promote a smooth and efficient flow of traffic or keep aircraft from overflying unsympathetic airport neighbors.

Right-of-way rules, along with nontowered airport traffic patterns and procedures, exist to prevent collisions in the air and on the ground. There are other benefits to adhering to the rules, such as an orderly traffic flow, noise abatement, and defusing potential right-of-way conflicts. However, traffic separation is the prime concern. This Safety Advisor covers the "rules of the road" at nontowered airports.

Some people use the term "uncontrolled airport" to mean the same thing as "nontowered airport," but nontowered airports are anything but "out of control."

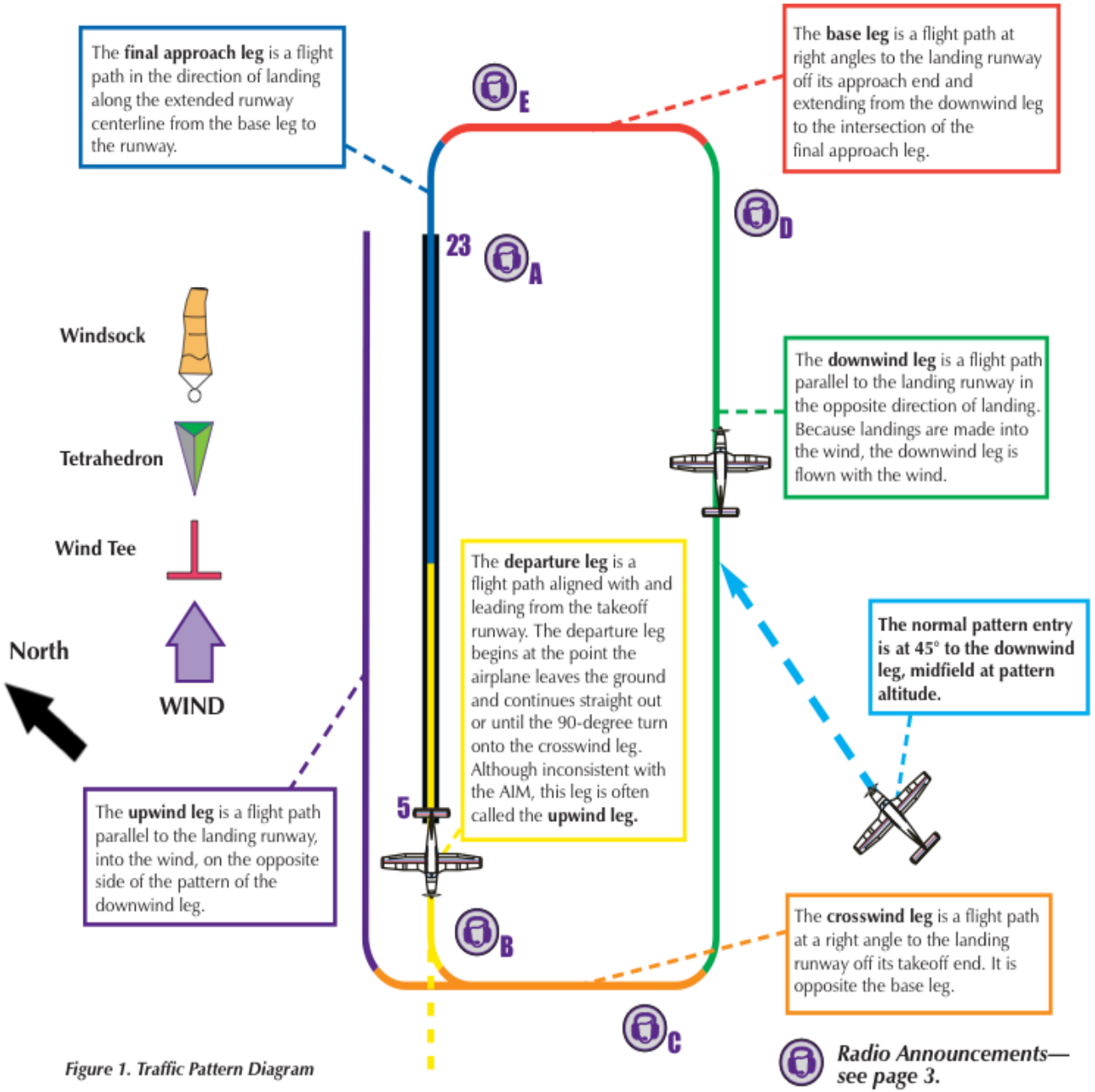


Figure 1. Traffic Pattern Diagram

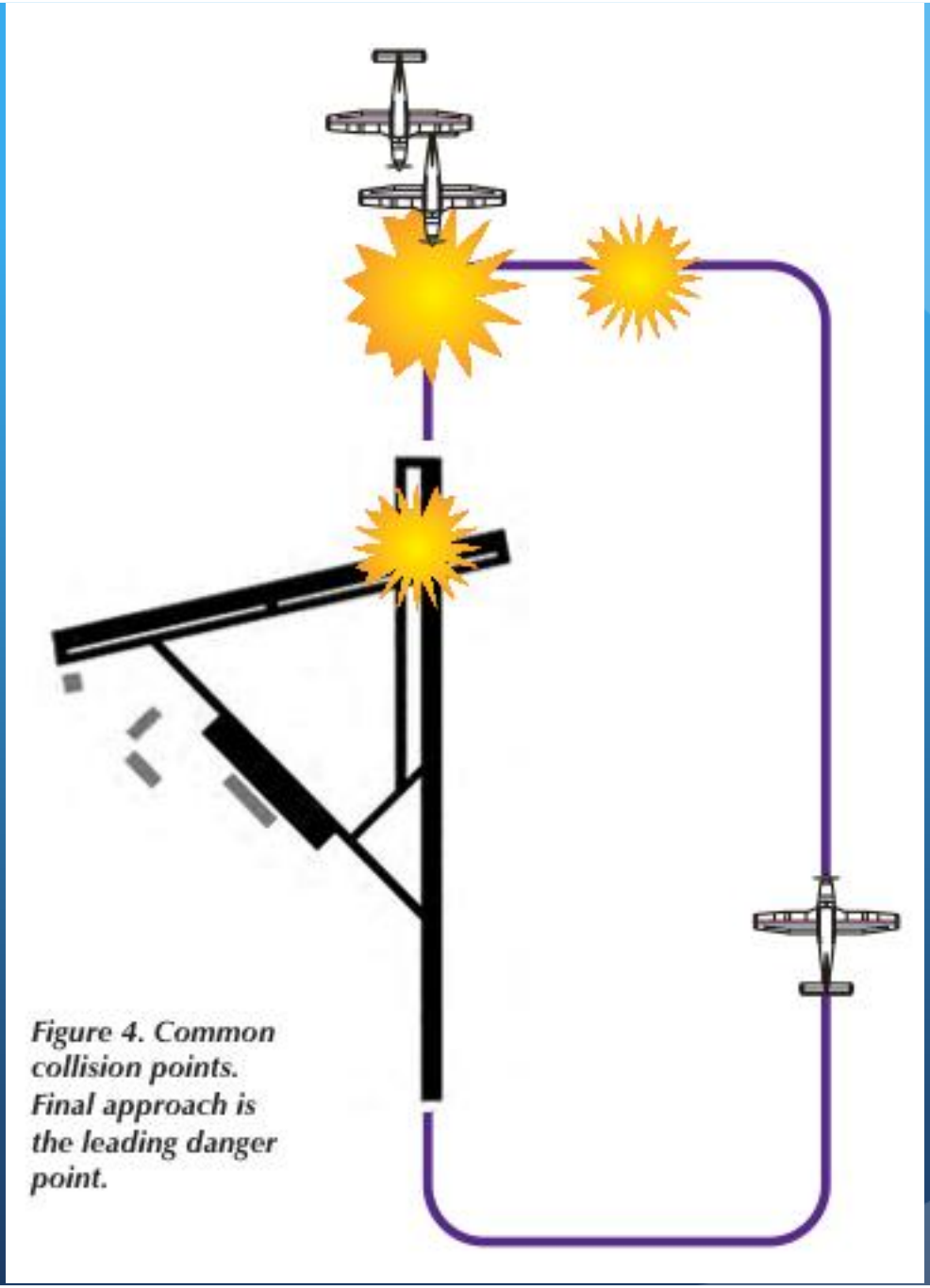


Figure 4. Common collision points. Final approach is the leading danger point.


An interactive course brought to you by the Air Safety Institute
Runway Safety
Don't let down your guard when you're on the ground.
Getting to and from the runway isn't always as simple as it sounds. In this course, we'll look at ways to get it done without any drama.
ENABLE SOUND for the best experience.
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Writer: Brian D. Peterson • Project Manager: Paul Deres
Take a break whenever you like; your progress is automatically saved!
Satisfactory completion of this course qualifies toward the AOPA Accident Forgiveness and FAA Wings programs.
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Runway Safety

2: Runway Incursions

1 ✓ 2-1
2 ✓ 2-2
2 ✓ 2-3
3 ✓ 2-4
4 ✓ 2-5
5 ✓ 2-6
6 ✓ 2-7
7 ✓ 2-8
8

Definition

Put simply, a runway incursion happens when someone ends up in the wrong place, at the wrong time.

The consequences depend on how wrong the place, and how wrong the time.

runway incursion:

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 take-off of aircraft.

? FAQs

NEXT→


Runway Safety
3: Signs, Markings, & Lights
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3-6
3-7
3-8
3-9
3-10
Taxi Tribulations
Feel like you've got a good handle on signs, markings, and lighting? You'll see three short videos and be asked a question about each.
Give this game a try!
1 Watch carefully: you'll only see each video once.
2 Choose the best answer for each question.
Taxi
Tribulations
Start Game
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