Airport Traffic Patterns
Standard airport arrival and departure procedures

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Airports have standard procedures for arrival and departure for the same reason that limited-access highways have standardized entrance and exit ramps. Standard traffic pattern procedures ensure an orderly flow of traffic and offer increased safety for all aircraft. If unique procedures were used, pilots arriving from distant locations would have no idea what to do. Airport traffic patterns are not the place for originality; pilots have many skills, but clairvoyance is not among them. By using standard procedures, every pilot knows what to expect from the other aircraft in the pattern.

At most airports, you'll normally fly a standard traffic pattern. Think of the pattern as an airborne rectangle, with one of its long sides aligned with the active runway. The active runway is the one currently being used by traffic and, usually, the one most closely aligned into the wind. It's a fact that most accidents occur near an airport, so follow proper procedures and keep looking for other traffic!

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Downwind

Parallel to the runway, about 1/2 to 1 mile from it, is the downwind leg, which is flown in the opposite direction from aircraft landing and taking off on the runway.

Base

When you're flying downwind and your landing point lies at about a 45 degree angle behind you, you'll normally turn onto the base leg. Base is the place where you ensure that the runway is clear and there's no conflicting traffic, like an aircraft making a straight-in approach, or flying some other nonstandard traffic pattern.

Final

The leg that overlies the runway where aircraft approach to land is called final. When you complete the turn from base to final, you should be aligned with the extended centerline of the runway and at least 1/4 mile from its end, to give you time to get established properly for the landing itself.

Upwind

Assume you want to get a good look at the runway before landing. You would fly parallel to the runway in the direction of landing, but offset to the side away from the pattern. It's called the upwind leg and it affords you a bird's eye view of the runway. If, for some reason, you abort a landing approach and do a "go-around" or "balked landing," you can offset to the side of the runway and fly the upwind leg.

Departure

An airplane taking off from the runway is said to be "departing," and flies the departure leg.

Crosswind

The short leg between the departure leg and downwind is called the crosswind leg.

Which Way do I Turn?

Left-Hand Turns are Standard

Traffic patterns normally use left turns because an airplane with side-by-side seating is usually flown from the left seat, and because the pilot has a better view out to the left. Hence, left-hand patterns are standard.

Right-Hand Turns May Be Used

Right-hand patterns may be used at airports, or on designated runways, because of populated areas or some kind of obstruction that makes left traffic undesirable or unsafe. A right-hand pattern has the same shape as a left-hand pattern, but as you fly the pattern you make right turns instead of left turns.

How Do You Know if the Pattern is Nonstandard?

Airport/Facility Directory

One way to learn about a nonstandard pattern is to look it up in the Airport/Facility Directory or other airport guide. That airport's information will include any runways that have right traffic.

UNICOM

If there's a UNICOM at the airport, the UNICOM operator will normally advise you when right traffic is used for a particular runway.

Traffic Pattern Indicator

You can also fly over top of the airport, above traffic pattern altitude, and look at the traffic pattern indicators. These are usually located with a segmented circle at a prominent place at the airport. The center of the traffic pattern indicator represents the runway, and the legs represent a map depicting what kind of turn to make from base to final.

The traffic pattern indicator, located in a segmented circle, represents runways 27 and 9. If you were landing on runway 27, you'd make left-hand turns from base to final—and you'd be flying standard left traffic for runway 27. If you were landing on runway 9, you would make right-hand turns from base to final—and you'd be flying non-standard right-hand traffic for that runway.

Entering and Departing the Traffic Pattern

Traffic Pattern Altitude

The recommended altitude for traffic pattern entry is 1,000 feet above the airport elevation, unless another altitude has been established for that airport or runway. Look in the Airport/Facility Directory to check for a nonstandard traffic pattern altitude, or confirm the correct pattern altitude using the radio. When you're descending to traffic pattern altitude, make slight clearing turns to check the area below and ahead of you for other traffic. You want to be in level flight at pattern altitude well before you enter the pattern. Descending while you're entering the pattern makes it harder for other pilots to see you, and you run the risk of descending onto another airplane.

Entering the Pattern

You should enter the pattern at the runway's midpoint, at a 45-degree angle to the downwind leg. If you aim for your intended landing point on the runway, you'll approach at the correct angle and join the pattern at midfield. A 45-degree angle is best for entry because it provides a good view of traffic on the downwind leg and limits the amount of turn needed to join the pattern.

Departing an Airport

When you take off, if you're staying in the pattern, start your turn to crosswind after passing the departure end of the runway and within 300 feet of pattern altitude. This helps ensure that you'll be at pattern altitude by the time you complete the turn from crosswind to downwind—and makes your airplane easier to spot for other traffic joining the pattern. If you're departing the airport you should either continue straight out on an extended departure leg, or make a 45-degree turn in the direction of the crosswind leg.

Special Departure Procedures

Some airports have established special departure procedures because of noise abatement or obstructions. These procedures will be posted on bulletin boards, and sometimes on signs near the run-up area. If special departure procedures have been established, be sure to follow them; in addition to being required, this is courteous behavior and enhances safety for everyone.

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