ASOS Research Brief

Research Request:

Best Practices for Uncontrolled Airport Operations

Research Response:

Uncontrolled airports can be a challenge in any aircraft. It is the responsibility of all pilots to be vigilant of surrounding traffic, and maintain a raised level of situational awareness. Some of us take the guidance of ATC for granted, and this complacency cannot transition over to the uncontrolled environment. It is at an uncontrolled airport where many near mid-air collisions occur, and this is where the lessons learned from primary training take over.

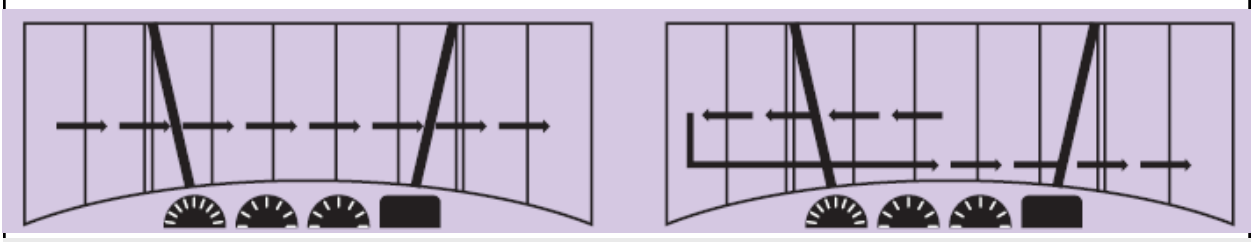
Before Arrival

- Perform a risk assessment of the airport, and determine if there are other viable controlled airports for alternatives.
- Remember traffic pattern procedures are advisory not regulatory.
- Keep in mind not everyone has a radio, and not everyone who has a radio uses it.
- Verify left or right hand traffic patterns before entry. It could be a right hand pattern due to terrain.
- Use instrument approach charts for additional aid such as the airport diagram, CTAF frequencies, and obstacles.
- Become familiar with the airport prior to departure, this includes:
  - -Airport environment
  - -Location of the FBO
  - -Orientation of the Runways
- The most important part of the transmission is the aircraft model; this will help others to identify you faster, determine your approximate speed, and anticipate how large your pattern will be.

- Use the proper phraseology in the pattern:
  - -Airport name
  - -Aircraft model
  - -Last three letters/numerals of the N number
  - -Airport name again
- Use the full N number if there is a similar sounding one in the pattern.
- Be prepared for smaller and slower traffic in the pattern.
- Have all necessary equipment preset or readily available such as the GPS, radio, charts, etc. This will allow you to concentrate on your visual scan.
- Monitor AWOS or ASOS systems 20-30 miles before arriving.
- Ensure landing light is on at least 10 miles from the airport.
- Monitor CTAF at least 10 miles out or as soon as practical.
- Maintain sterile cockpit in the pattern, while taxiing, and landing. Ensure passengers are aware of this rule as well.
- Ensure you are at pattern altitude before entering. It may be more difficult to spot traffic due to ground clutter.
- If there is no weather, other aircraft, or Unicom available, over-fly the field a minimum of 500ft above pattern altitude and observe the windsock for wind direction.
- A straight in approach may be made only if you ensure there will be no conflict.
- Be cognizant of the right-of-way rules.

Entering the Pattern

- Monitor CTAF as soon as possible to begin to form a mental picture of traffic in the area.
- Large and turbine aircraft should be at 1,500ft AGL or 500ft above the traffic pattern altitude.
- Ensure you state the name of the airport at the beginning and end of each transmission. Often, other airports in the area share the same frequency.
- Keep transmissions limited to essential information such as collision avoidance and airport advisory.
- Maintain a proper visual scan, as some aircraft do not have radios.
- Enter on 45 degrees to the downwind if possible. Aircraft entering other ways must yield to aircraft entering 45 degrees to the downwind.
- If you use IFR vocabulary in the pattern, ensure to supplement this with VFR information. VFR pilots may not be familiar with fixes and approaches in the area.



Side-to-side scanning method **Front to side scanning method**

- During busy, VFR conditions break off the instrument approach early and enter the pattern normally.
- If skydivers are present, maintain a distance of approximately 5 miles around the drop-zone and descend to at least 2,000ft AGL before arriving at the airport to help aid in visual identification of the skydivers.

In the Pattern

- Include the direction of traffic in your radio transmission, i.e. “left downwind.”
- Visually scan for aircraft entering the pattern and monitor the frequency as well.
- Announce your position just before turning; it’s easier to spot a banking aircraft.
- Clear the area before making the turn, i.e. lift/lower the wing.
- Visually clear the final approach path before you make your base to final turn and verbally confirm that “final is clear.”
- While making the base to final turn, verify there is not an aircraft below you.
- Aircraft on final have the right of way.
- Bank angles more than 30 degrees should not be exceeded.
- It is important to maintain adequate separation from other aircraft. Recognition of the type aircraft will help determine the necessary speed and wake turbulence separation.
- Know wind direction, and anticipate corrections.
- Keep the pattern as close as practical.

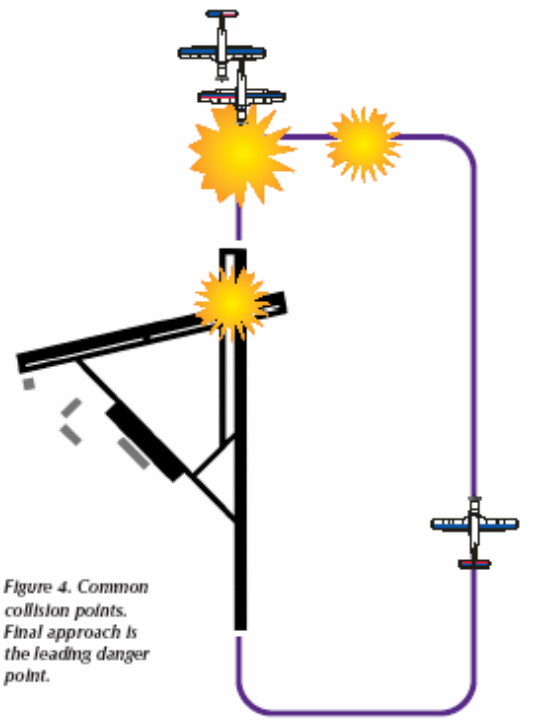


Figure 4. Common collision points. Final approach is the leading danger point.

Source: AOPA

Landing

- Perform at least two checks to ensure the gear is down and locked, and verbally confirm.
- Most mid-air collisions occur on final, continue to scan for traffic while on final.
- Visually confirm there is not an aircraft on the runway while on short final. If so, continue on the upwind opposite the pattern flow.
- State landing intentions on final. i.e. full stop.
- Monitor any visual aids such as the VASI or PAPI.

On the Ground

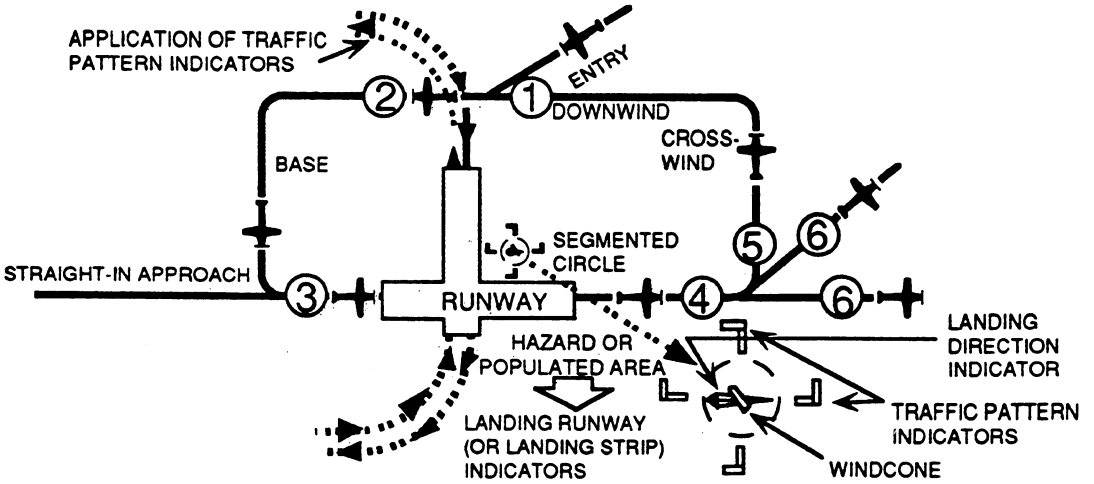
- Visually clear all intersections and announce “clear left, clear right, clear across” verbally.
- When crossing ANY runway, verbally announce on CTAF. Many times aircraft such as jump planes or banner tow aircraft may use another runway.
- Taxi slower than usual if you are unfamiliar with the airport environment. The taxiway surface may have irregularities.
- Be cautious of areas that will experience your jet blast or prop wash.

Departing the Pattern

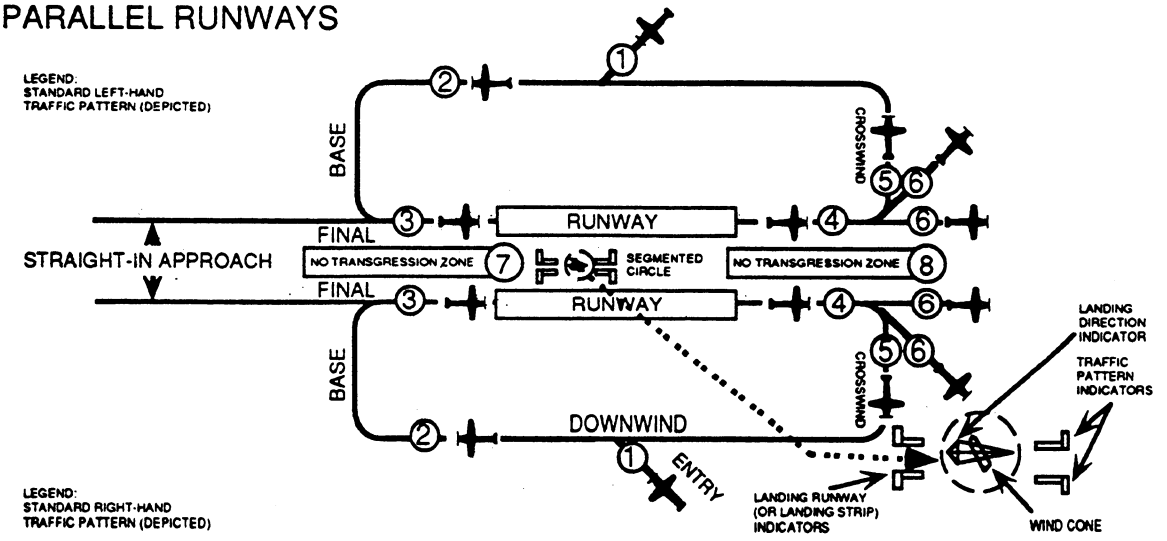
- Position and hold is not recommended. This leaves the aircraft in a vulnerable position.
- Be aware of noise abatement procedures.
- State intentions while announcing departure on the CTAF. This will let others know what your planned direction of flight will be.
- During climb-out, lower nose or perform small S-turns if visibility is obscured due to a high angle of attack.
- The turn for crosswind should be executed approximately 300ft below pattern altitude.
- Departures should be straight out, or a 45 degree turn in the direction of the traffic pattern.

AIRPORT OPERATIONS

SINGLE RUNWAY



PARALLEL RUNWAYS



KEY

(1) Enter pattern in level flight, abeam the midpoint of the runway, at pattern altitude. (1000' AGL is recommended pattern altitude unless established otherwise).

(2) Maintain pattern altitude until abeam approach end of the landing runway, or downwind leg.

(3) Complete turn to final at least 1/4 mile from the runway.

(4) Continue straight ahead until beyond departure end of runway.

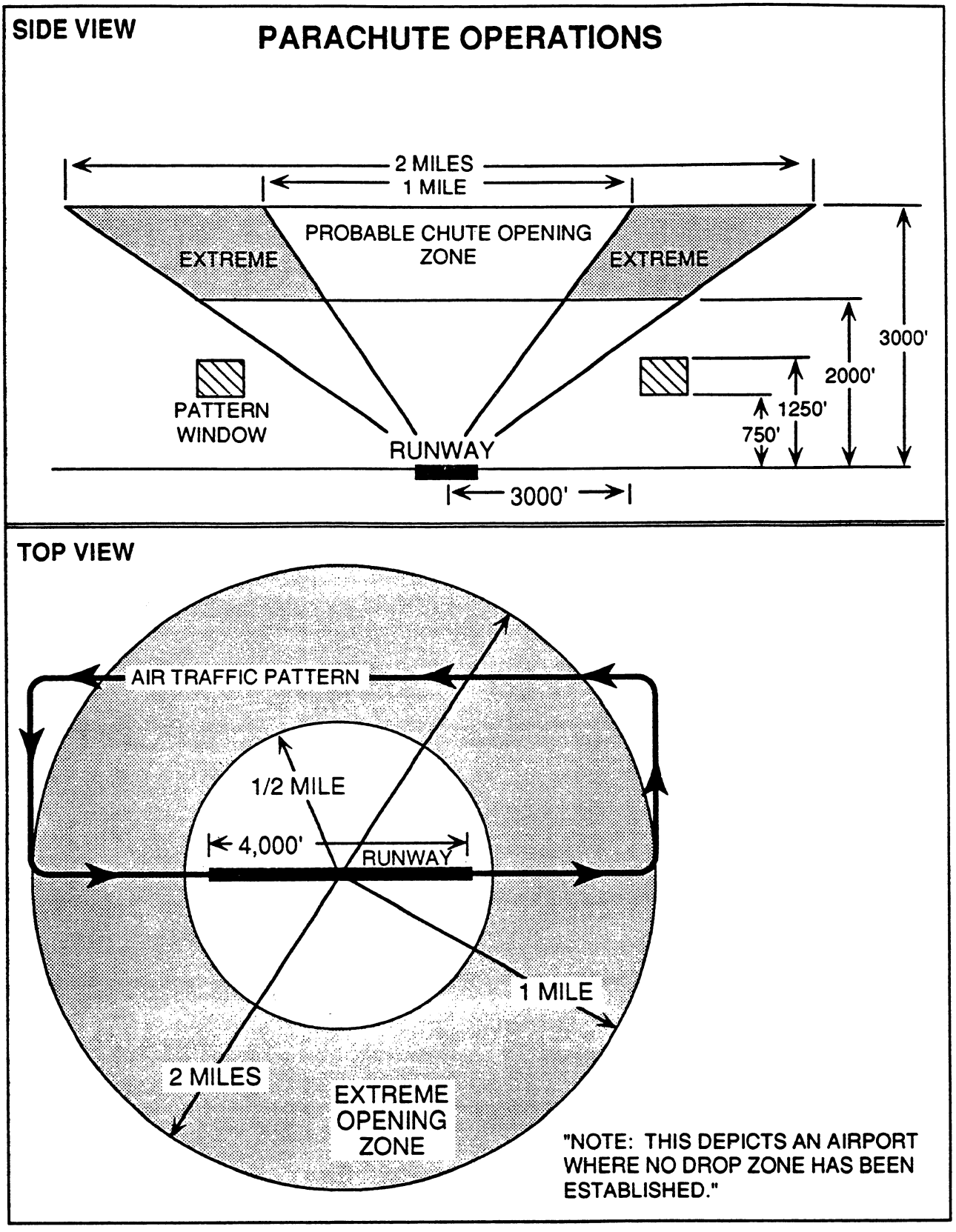
(5) If remaining in the traffic pattern, commence turn to crosswind leg beyond the departure end of the runway, within 300 feet of pattern altitude.

(6) If departing the traffic pattern, continue straight out, or exit with a 45º left turn beyond the departure end of the runway, after reaching pattern altitude.

(7) Do not overshoot final or continue on a track which will penetrate the final approach of the parallel runway.

(8) Do not continue on a track which will penetrate the departure path of the parallel runway.

PARACHUTE OPERATIONS



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