

FOUNDATIONS OF FLIGHT

READING SURFACE WIND CONDITIONS



Brought to you by AXIS Flight School Instructor Niklas Daniel at Skydive Arizona in Eloy. Photos by Niklas Daniel.

Reminder: Jumpers prefer to land into the wind, but it is not as important as landing with a level wing in an area free of obstacles.

Purpose

- ▶ To increase situational awareness and increase ability to make better landing pattern and direction decisions
- ▶ To better anticipate your movement across the ground (holding, running and crabbing)
- ▶ To anticipate and avoid turbulent conditions

Preparation

Wind direction is expressed in terms of its origin, and its velocity is expressed in knots or meters per second. A 5-knot wind (3 meters per second) coming from 270 on the compass indicates a landing direction to the west.

Wind Indicators

Since wind is only indirectly visible, aviators use a variety of wind indicators to determine wind direction and intensity. These indicators should be situated away from objects such as buildings or trees that could influence the flow of air. Personally observe conditions before boarding the aircraft, but remember that winds can change in the 20 minutes it takes to get to exit altitude. If you are not absolutely certain you are qualified to jump in the conditions at hand, do not board.

Flags, wind blades and streamers: These are popular, inexpensive, easy to transport and generally mounted to a pole. The pole will be on the upwind side of the indicator when it's flying.

Wind socks: These are common at larger airports and are generally orange. Air flows through the large opening and out the small end, which points downwind. The stronger the wind, the straighter the sock extends. If conditions are gusty, the sock will swing back and forth and the angle at



which it hangs will fluctuate. Remember to "eat the carrot" (land from the small end to the large end).

Environment: Nature offers a variety of great wind indicators. Water is flat when winds are calm, but ripples and waves grow larger as wind intensity increases. Grass, brush, dust, smoke, rain and fog can also provide clues. Situational awareness is learned: When you are at a location other than the DZ, ask yourself what the winds are doing how you would land a parachute.

Landing Direction Indicators

Landing direction indicators only indicate landing direction, not wind intensity or gusts. Many are set manually, so if the person on the ground forgets to reset the indicator if the winds change, the reading will be faulty.

Tetrahedrons: These pivot on top of a pole. The small end points into the wind, so jumpers land facing the large end. Some drop zones tie them down to indicate a desired landing direction. If not maintained and calibrated, they may not work.

Wind Ts: These align themselves like a weather vane, and the T should appear right side up as the jumper lands.

VS-17 panels: Generally a military tool, these brightly colored T- or V-shaped panels

are laid on the ground. With the V, jumpers land from the large to small end (like a tetrahedron). With the T, they land so that the T appears right side up (like a wind T).

Headlights: During night jumps, ground crew will park cars at the edge of a landing area with the headlights on and oriented in the direction of landing (into the wind). Jumpers then approach the illuminated landing area taillights to headlights (as though following the car in traffic), which avoids the light shining directly in their eyes.

Helpful Hints

Check wind indicators frequently (at least after each altitude check) under canopy. Remember that turbulence such as dust devils and rotors generated by the landscape, buildings or spinning propellers of nearby running aircraft can compromise a good reading. If your DZ has multiple wind indicators, use the one closest to where you intend to land. However, if wind indicators that are near each other are indicating different directions, turbulence may be present and you should try to avoid landing in that area if possible.