

IN-FLIGHT ILLUSIONS

1. **Leans** – An abrupt correction of a banked condition can create the illusion of banking in the opposite direction.
2. **Coriolis Illusion** – An abrupt head movement in a prolonged constant rate turn will create the illusion of moving in a totally opposite direction.
3. **Inversion Illusion** – An abrupt change from a climb to straight-and-level flight can create the sensation of tumbling over backwards.
4. **False Horizon** – Sloping Cloud formations, an obscured horizon, stars and ground light can create the illusion of not being aligned with the actual horizon.
5. **Autokenesis** – A light will appear to move if stared at long enough.
6. **Runway Width Illusion** – A narrower-than-usual runway will create the illusion that the aircraft is higher than it actually is. This will result in a lower-than-normal approach. The opposite will occur for a wider-than-normal runway.
7. **Featureless Terrain Illusion** – Absence of ground features will create the illusion of a higher approach and cause the pilot to fly at a lower altitude.
8. **Empty Field Myopia** – A featureless sky without stars or obscured by haze will cause the eyes to focus about three to four feet in front of them.
9. **Runway and Terrain Slopes Illusion:**
 - Upsloping terrain, runway, or both create the illusion that the aircraft is higher than it actually is. The pilot will fly lower than normal.
 - Downsloping terrain, runway or both create the illusion that the aircraft is lower than it actually is. The pilot will fly higher than normal.
10. **Atmospheric Illusion:**
 - Rain on the windshield creates an illusion of greater height.
 - Haze creates an illusion of greater distance.
 - *A pilot may fly a lower approach due to these illusions.*
11. **Ground Light Illusion:**
 - Bright runway lights and/or approach lights give the illusion of less distance. Pilots tend to fly higher.
 - Few ground lights is the same as Featureless Terrain Illusion.