

Fatal Distraction

How Easily Pilot Attention is Lured Away

By Steve Sparks (USHST team member)

Managing distractions is critical to aviation safety. That's especially true for rotorcraft pilots, who routinely deal with many unique challenges that offer little room for error. With state-of-the-art avionics, sophisticated alert systems, and other attention grabbers finding their way into cockpits, flight crews must be vigilant in keeping their attention on what matters most — aircraft control. While certain distractions reveal themselves sequentially, others demand attention simultaneously and can easily disrupt the entire operation.

The ability to inhibit unwanted distractions while attending to a primary flying task is critical. That's why the FAA and safety experts with the United States Helicopter Safety Team (www.USHST.org) continue to advocate best practices for helping pilots effectively manage distractions. Let's look at what causes some of these distractions, along with some effective coping strategies you can use on your next flight.

Tunnel Vision

Tunnel vision (fixation) often translates into degraded pilot performance. Situations that demand pilot attention for prolonged periods of time will often have an adverse effect on other aspects of flight. While some situations require more focused attention on a particular area or task, others require pilots to divide their attention among several different actions. As these scenarios play out, it is often difficult to prioritize effectively, especially when things get busy.

Auditory distractions often cause the most harmful impact on pilots, because they can capture attention for long periods of time. Pilots are more likely to attend to auditory distractions because of the amount of attention required to capture, process, and respond to such events. Flight alert systems such as Enhanced Ground Proximity Warning Systems (EGPWS) use digitized voice commands to capture attention, causing pilots to respond more rapidly. "Whoop-Whoop- TERRAIN, TERRAIN - PULL UP."

We Interrupt This Message

So how do we best define distractions in aviation? Distraction means: to draw apart; to turn aside; to draw or direct to a different object or in different directions at the same time; or to stir up or confuse with conflicting emotions or motives. In other words, a pilot must be preoccupied with an ongoing task in order to be distracted.

The question of why one event in the cockpit stimulates a pilot's attention over another causes many people to scratch their heads. Generally speaking, humans are only able to perform two tasks concurrently in limited situations, even if they are skillful when each task is performed separately. A pilot may be exceptionally skilled at programming the Flight Management System (FMS) and at maintaining situational awareness, but while that same pilot is conducting one of these events, the preciseness of the second suffers. Unfortunately, something has to give.

The challenge for helicopter pilots is to schedule their activities in a way that ensures safety critical tasks remain top priority. Throughout training, pilots are constantly reminded to aviate, navigate, and communicate, in that order. This common prioritization schedule is often emphasized as a defense mechanism to cue pilots away from non-essential activities.

Heads Up

Some basic procedures for mitigating distractions include: develop standard operating procedures (SOPs), follow checklist procedures, and ensure positive aircraft control. If a task cannot be completed without interruption, give it extra time and patience. Tune out unwanted distractions by maintaining your full attention to the task at hand.

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This essay reprinted from FAA Safety Briefing

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NTSB Safety Brochure on How to Disconnect from Deadly Distractions:

www.nts.gov/safety/mwl/Documents/MWL_2015_Factsheet_01.pdf