

Ligado Impacts to Aviation GPS Receivers¹

Application	Danger Range fm Ligado Tower	Impact Area ²	Impact
Drone/ UAV Survey & Precision Farming	3,400 meters	All urban, suburban	Navigation unreliable or inoperable
Most Drones	1,040 meters		Commonly used GPS devices unreliable for navigation ³
General Aviation	1,040 meters		Electronic Flight Bags used by commercial & private pilots not reliable
Commercial Aviation Support	1,040 meters		
Emergency Helicopter, Certified Drones	76 meters	12% of Urban/suburban	Pilot distraction during critical operations, or pilot disabling terrain warning systems.

Survey & Precision Farming Drones – High performance receivers measure location to within centimeters. These kinds of receivers will be impacted anywhere within 3,400 meters (2+ miles) of a Ligado transmitter.

General Navigation & Electronic Flight Bags - GPS used by light aircraft not certified for instrument flight⁴, and drones not approved by the FAA under instrument flight rules in regulated airspace will be impacted. Testing found that these receivers begin to fail within 1,040 meters (.6+ miles) of a Ligado transmitter.

Emergency Helicopters & Certified Drones– Aviation equipment certified for IFR use by the FAA, including that for a very limited number of drones operated in air traffic controlled airspace, are much more resistant to transmitter interference than most other types of GPS receivers. But that does not mean they are immune. The FAA advises that these receivers are not reliable when they are closer than 250 ft (76.2 meters) of a Ligado transmitter. - While 12% might not seem a lot, imagine you are an EMS, fire, or police helicopter pilot responding to accidents and other calls at all hours of the day and night. Low-level and confined area helicopter operations are the most demanding and hazardous you face. For any given low-level mission there will be a 12% chance your GPS won't work. Neither will the GPS-fed Terrain Awareness and Warning System (TAWS) that helps you avoid striking power lines and other obstructions.

¹ Information from DoT Adjacent Band Compatibility Test confirmed with FAA experts

² Ligado tower spacing advertised at 433 meters

³ Aircraft flying under visual flight rules may have a non-aviation certified GPS for “situational awareness” but are supposed to navigate by looking at the surface. Many light aircraft have no other electronic navigation other than a GPS device not certified by the FAA.

⁴ ibid