

November 17, 2020

The Honorable Roger Wicker

Chairman
Committee on Commerce, Science, and
Transportation
United States Senate
Washington, DC 20510

The Honorable Peter DeFazio

Chairman
Committee on Transportation and Infrastructure
United States House of Representatives
Washington, DC 20515

The Honorable Maria Cantwell

Ranking Member
Committee on Commerce, Science, and
Transportation
United States Senate
Washington, DC 20510

The Honorable Sam Graves

Ranking Member
Committee on Transportation and Infrastructure
United States House of Representatives
Washington, DC 20515

Dear Chairman Wicker, Ranking Member Cantwell, Chairman DeFazio and Ranking Member Graves:

We write you today to express our concern over the Federal Communications Commission's (FCC) recent action to reallocate a portion of the 3.7-4.2 GHz frequency band, making the frequency spectrum from 3.7-3.98 GHz available for flexible use, including 5G applications by the telecommunications industry. The aviation industry noted in the FCC rulemaking process that deployment of 5G networks in this frequency band may introduce harmful radio frequency (RF) interference to radar altimeters currently operating in the globally-allocated 4.2–4.4 GHz aeronautical band. Radar altimeters are deployed on tens of thousands of civil aircraft in the United States and worldwide to support several critical safety-of-life aircraft functions throughout multiple phases of flight. Radar altimeters are the only sensor onboard a civil aircraft which provides a direct measurement of the clearance height of the aircraft over the terrain or other obstacles.

In response to the FCC *Report and Order*¹, in April 2020 RTCA Special Committee 239 (SC-239) formed a 5G Task Force to lead a study effort as a multi-stakeholder group that included open participation from the interested public. Using technical information supplied by the mobile wireless industry and radar altimeter manufacturers, a quantitative evaluation of radar altimeter performance regarding RF interference from future 5G networks in the 3.7-3.98 GHz band was conducted, as well as a detailed assessment of the risk of such interference occurring and impacting safety.

RTCA submitted their full report in a filing to the FCC on October 8, 2020². The results of this comprehensive study revealed a major risk that 5G telecommunications systems in the 3.7–3.98 GHz band will cause harmful interference to radar altimeters on all types of civil aircraft—including commercial transport airplanes; business, regional, and general aviation airplanes; and both transport and general aviation helicopters. The results of the study performed clearly indicate that this risk is widespread and has the potential for broad impacts to aviation operations in the United States, including the possibility of catastrophic failures leading to multiple fatalities, in the absence of appropriate mitigations.

We therefore request your direct involvement with key stakeholders to protect the frequency bands used by radar altimeters that are installed in tens of thousands of airplanes and rotorcraft throughout the nation. We are concerned that without this congressional intervention to understand potential implications and ramifications, decisions will be made with a frightening lack of understanding of aviation requirements. The RTCA Report is the most comprehensive analysis and assessment to date on this subject, based on the best assumptions, parameters, and data available to date. It has been peer reviewed for accuracy and validity and should not be dismissed by the Commission. Doing so would be a disservice to the safety of the traveling public and put our nation's airlines, business and general aviation, and helicopter operations at risk.

We look forward to continuing our dialogue with you on this important topic. Thank you for your consideration.

Aerospace Industries Association | General Aviation Manufacturers Association | Aircraft Electronics Association
Aircraft Owners and Pilots Association | Experimental Aircraft Association | National Air Transportation Association
Helicopter Association International | National Business Aviation Association | Airborne Public Safety Association
Airlines for America | Air Line Pilots Association, International | Radio Technical Commission for Aeronautics
Regional Airline Association | National Air Traffic Controllers Association

¹ *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343 (2020) ("Report and Order").

² See *Assessment of C-Band Mobile Telecommunications Interference on Low Range Radar Altimeter Operations*, attachment to Letter of Terry McVenes, President and CEO, RTCA, Inc., to Marlene Dortch, FCC, GN Docket No. 18-122 (Oct 8, 2020) ("RTCA Report").