

December 10, 2001
Docket Management System
U.S. Department of Transportation
Room Plaza 401
400 Seventh Street SW.
Washington, DC 20590-0001
Internet <http://dmses.dot.gov/submit/>
Docket number [FAA-2000-10910]
Comments regarding Notice of proposed rulemaking (NPRM).
Collision Avoidance Systems
To Whom It May Concern:

I am a party with a vested interest in this NPRM both as a member of the aviation community and a member of the traveling public.

I fully support the FAA's effort to rectify a long-standing oversight in the Collision Avoidance of air traffic. I would like to suggest though that you consider the following points in your final rule.

Timeline:

When congress initially drafted legislation to make a Collision Avoidance System mandatory for all aircraft with 10 or more passenger seats, or weighing more than 33,000 pounds, a compliance date of Jan 1, 2000 was chosen. Unfortunately due to political reasons the bill was delayed and when it finally became law, the compliance date was changed to Jan 1, 2003. This date happens to also coincide with the date for mandatory equipage in several ICAO states. We feel that this is a realistic compliance date, as the hardware is readily available, most aircraft have already approved TSO for the installation and many more are already prewired for TCAS II. Even when that was not the case, a major cargo carrier was able to design, receive approval and install TCAS II in several aircraft that were to be used as passenger carriers in less than 9 months after the decision was made to convert those aircraft. Thus it is our opinion, that an effective date of Jan 1, 2003, as envisioned by congress, is realistic. The FAA might consider an extension to the date of October 1, 2003 if an operator could prove extenuating circumstances. There is no reason not to realize the benefits of this regulation as soon as possible, considering that in some cases the operators could comply by simply sliding the TCAS equipment into a rack on aircraft already prewired for TCAS II.

Alternative Technology (ADS-B):

I fully support the FAA's intent to look forward and embrace new technologies when they become available. We are not opposed to the development and future application of ADS-B, it has some very exciting potential applications, such as runway incursion avoidance, close parallel approaches and more. However, it can and must not be used as the "last bubble of safety" in Collision Avoidance. We must not have the all three elements of CNS (Communication, Navigation, Surveillance) with a single point of failure such as the loss of the GPS signal, or of the onboard GPS receiver. After the horrible events of September 11, we also must guard against the real threat of a willful and malicious jamming of the extremely weak GPS signal by hostile individuals or entities. Such jamming equipment is available readily on the black market and will render GPS and thus ADS-B inoperable for up to a hundred miles from the jammer's location . Furthermore ADS-B based Collision Avoidance would utilize ground based radar processed data in order to "see" Mode C transponders (TIS-B). This would only be available in less than 50% of the US surface area served by these radars and not

be available outside of the US at all. Just when Collision Avoidance becomes even more critical, when radar is inoperative, a big part of potential threats will not be avoided. For these reasons alone, a Collision Avoidance System based on ADS-B is not possible. We therefore support only a Collision Avoidance System that is based on TCAS II, but are not opposed to an enhanced unit that uses ADS-B to improve range and resolution. The last line of defense must remain with the proven, independent of ground or space based resources, TCAS II. Thus any possible pleas to extend the compliance date to "develop alternative technology" should be rejected.

Sincerely submitted by:
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