

TCAS Version 7 Upgrade Project

Corporate
Communications
(817) 567-8019

FORT WORTH, TX. November 2004

– HTA recently completed the Traffic Alert and Collision Avoidance System (TCAS) upgrade to Version 7 (7.0 software from 6.04 software), IAW Collins STC ST00881W1-D modification of the TCAS II system, and Collins Service Information Letter, SIL 1125-34-108.



The objectives of the version 7 is to increase the safety benefits of TCAS, make it more compatible with procedures used by Air Traffic Control (ATC) and address operational concerns by pilots' operating systems with the 6.04 versions of TCAS in Reduced Vertical Separation Minimums Airspace. TCAS version 7 retains the visual and audio annunciations but has been modified to make the pilot's response to a Resolution Advisory (RA) more intuitive. The Horizontal Miss Distance Filter will recognize encounters with adequate horizontal separation between aircraft and whenever possible suppress a Resolution Advisory which should result in a reduction of RA's in the US Airspace by 25% and 40% in European Airspace. TCAS version 7 also allows an RA reversal such as changing "Climb" to "Descend" in a coordinated encounter with another TCAS aircraft.

The Intruder Surveillance has been improved resulting in aircraft being more reliably displayed and tracked at longer ranges in high-density traffic areas. RVSM compatibility has Traffic Advisories (TA's) thresholds between FL 300 and FL 420 reduced to eliminate nuisance "TA's" while operating in RVSM airspace. The aural warning inhibit altitude has been reduced to 500 feet Above Ground Level (AGL) to increase the awareness of TA's issued while on approach. A reduction in "Bump Up" encounters at altitudes of 10,000 to 30,000 where an aircraft is climbing or descending to an altitude 1000 feet above or below the TCAS aircraft has been slightly delayed in the issuance of an RA reducing the number of unwarranted RA's. The altitude crossing warning system has been biased to also reduce the number of RA's when in RVSM airspace.

HTA Aviation, LLC, a privately held company, providing superior CLS and COMBS services for our government and support for the world's most technologically advanced business jet aircraft. HTA also offers Service Engineering (DER & PMA), Technical Publications, and Consulting Services for the business aviation industry.