

# Global Aerospace Design Corp.



## TCAS 7.1 White Paper

October 23, 2014

**Global Aerospace Design Corporation**

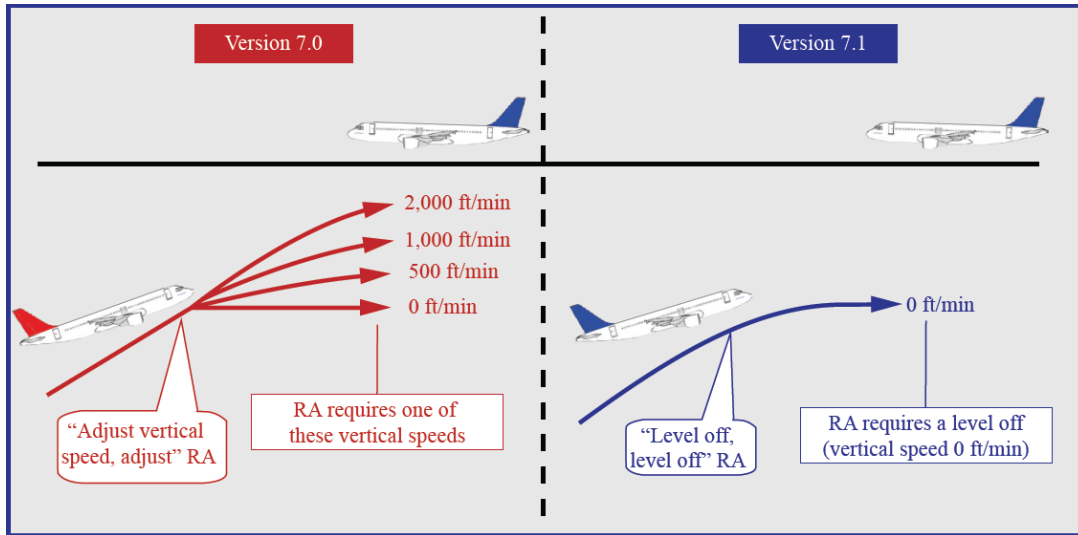
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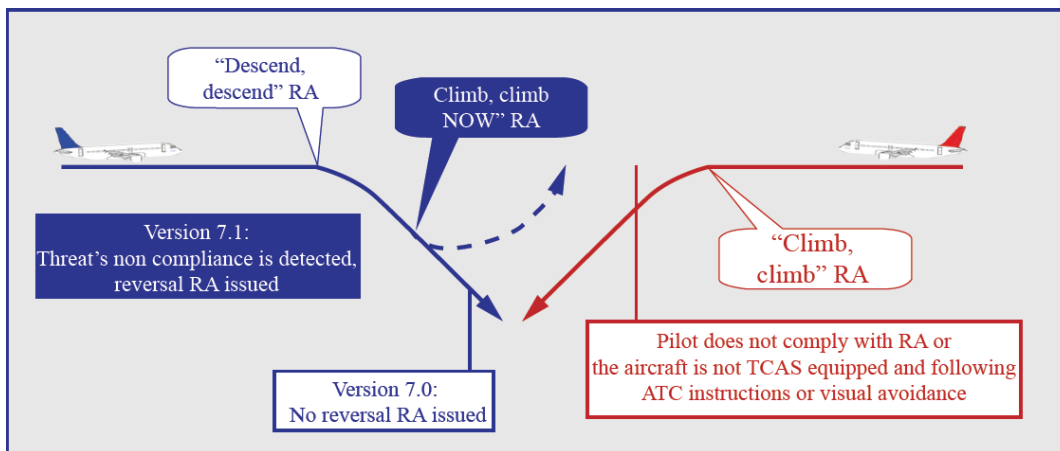
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### Traffic Collision Avoidance System (TCAS)

While TCAS II is not an integral component in the ADS-B systems onboard aircraft, the two systems are linked. TCAS involves communication between all aircraft equipped with an appropriate transponder. Each TCAS-equipped aircraft interrogates all other aircraft in a determined range about their position (via the 1030 MHz radio frequency), and all other aircraft reply to those interrogations (via 1090 MHz). TCAS equipment (V7.1) which is capable of processing ADS-B messages may use this information to enhance the performance of TCAS, using techniques known as “Hybrid Surveillance” (part of Honeywell SmartTraffic upgrade).

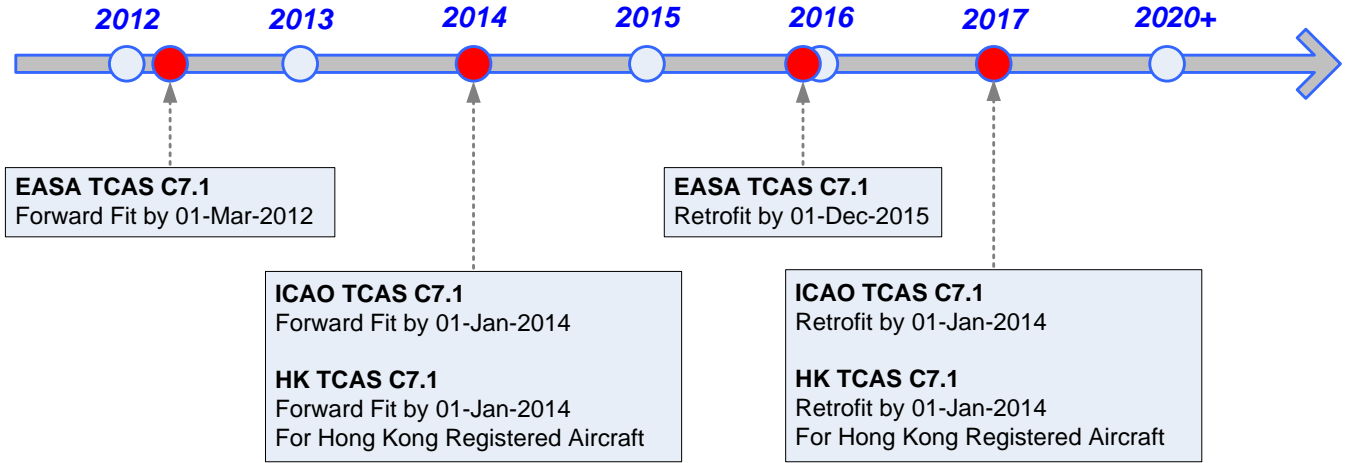


- Added capabilities:
  - o Corrects missed and late TCAS reversals – improves reversal logic.
  - o “Level Off” Aural Alert – replaces “Adjust Vertical Speed”
  - o Change to Descend RA’s at Low Altitude (through 1000 ft AGL).
  - o Modifies the “Datalink Capability Report” to Mode S transponder.
  - o Allows the transmission of the TCAS processor part number and software level.
  - o Corrects TCAS multi-aircraft logic issues – reduces the risk of “close-encounters” of multiple aircraft in RVSM airspace.



- **Mandates**

### TCAS Change 7.1 Timeline



**FAA**  
Encouraged, but not mandated

- **Upgrade Path**

- **Options:**
  - Equipment Replacement
  - Software Upgrade - Existing TCAS II Computer (TTR-921 or TCAS-2000) only requires a software upgrade.
  - Requires amended TCAS STC.
- **Estimated Pricing:**
  - Equipment Replacement: Specific to each aircraft
  - Software Upgrade: Varies dependent upon equipment
- **Training** – operator training required as part of certification plan.



○ **Certification**

- ***Global will coordinate all certification activities*** with the FAA/EASA as well as work with aircraft operators to obtain operational approval by the competent authority of the State from which they hold an Air Operator Certificate. Must provide evidence which pertains to:

- Changes to training and maintenance programs;
- Changes to manuals, operational procedures, minimum equipment lists;
- Other areas necessary for safe and effective TCAS use and the qualification of aircrews through the approved training programs.



***GLOBAL WILL NAVIGATE YOUR FLEET THROUGH TCAS, NEXTGEN AND FANS 1/A!***