



# ADS-B and Gliders

By Aaron Scicluna

# Talking Points...

- What is ADS-B?
- ADS-B and the FAA
- What is the FAA doing with it?
- Why is it important?
- Benefits for the community
- Concerns
- Questions?

# What is ADS-B?

- **A**utomatic
  - Periodically transmits information with no pilot or operator input required
- **D**ependent
  - Position and velocity vector are derived from the Global Positioning System (GPS) or a Flight Management System (FMS)
- **S**urveillance
  - A method of determining position of aircraft, vehicles, or other assets
- **B**roadcast
  - Transmitted information available to anyone with the appropriate receiving equipment

What is ADS-B Cont'd.



**ITT**

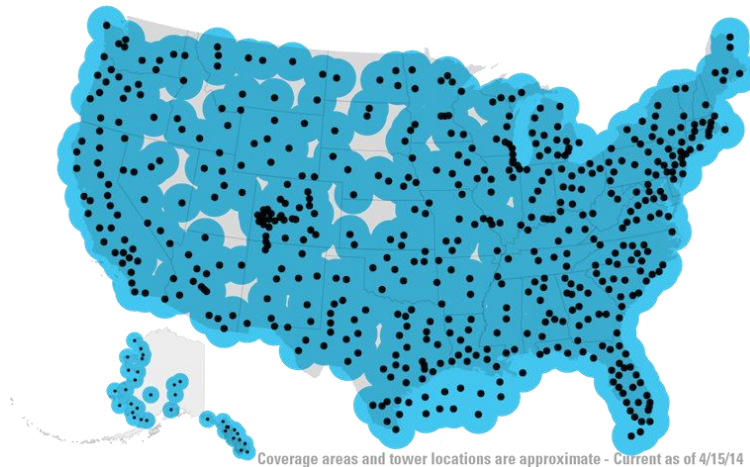
*Engineered for life*

# ADS-B and the FAA

- ADS-B Out equipped aircraft required by January 1, 2020
- Critical areas ADS-B is required after January 1, 2020 –
  - Class B and C airspace areas and above
  - Within 30 nm of KORD
  - Above 10,000 feet MSL except when below 2500 AGL
  - Within lateral boundaries of Class B or C airspace
- Gliders and balloons are exempt under FAR 91.225(e) in most airspaces.
- Essentially replaces transponders and their FAR current requirements

# Why is it important to us?

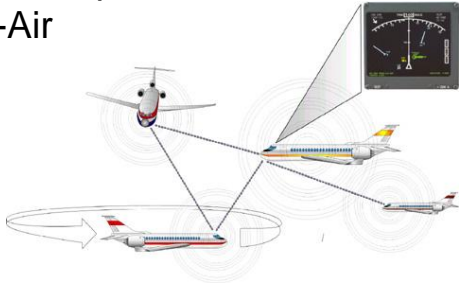
- What about tow planes? 30 nm radius from KORD?
- Additional reliance on collision avoidance technology by pilots
- Added safety benefits and weather during flights
- NEXTGEN technology and future of FAA ATC
- PowerFlarm can detect ADS-B Out equipped aircraft



# Benefits to the community

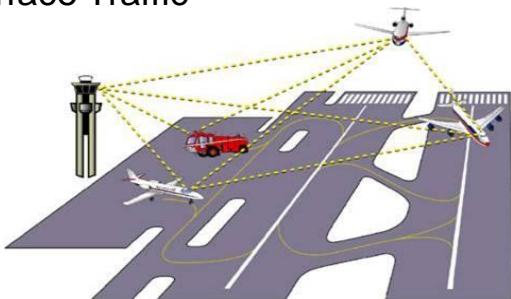
## Air-to-Air

- Improved Separation Standards
- Improved Low-Visibility Approaches
- Enhanced See and Avoid
- Enhanced Operations for En Route Air-to-Air



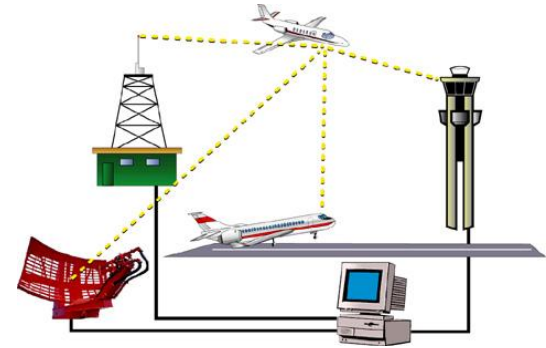
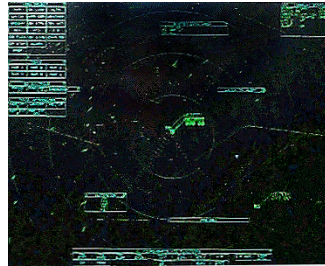
## Ground-to-Ground

- Improved Navigation on Taxiways
- Enhanced Controller Management of Surface Traffic



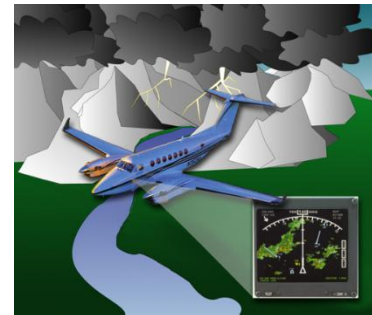
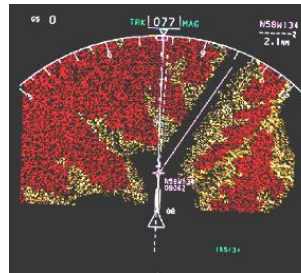
## Air-to-Ground

- Surveillance Coverage in Radar / Non-Radar Airspace



## Ground-to-Air & Self-Contained

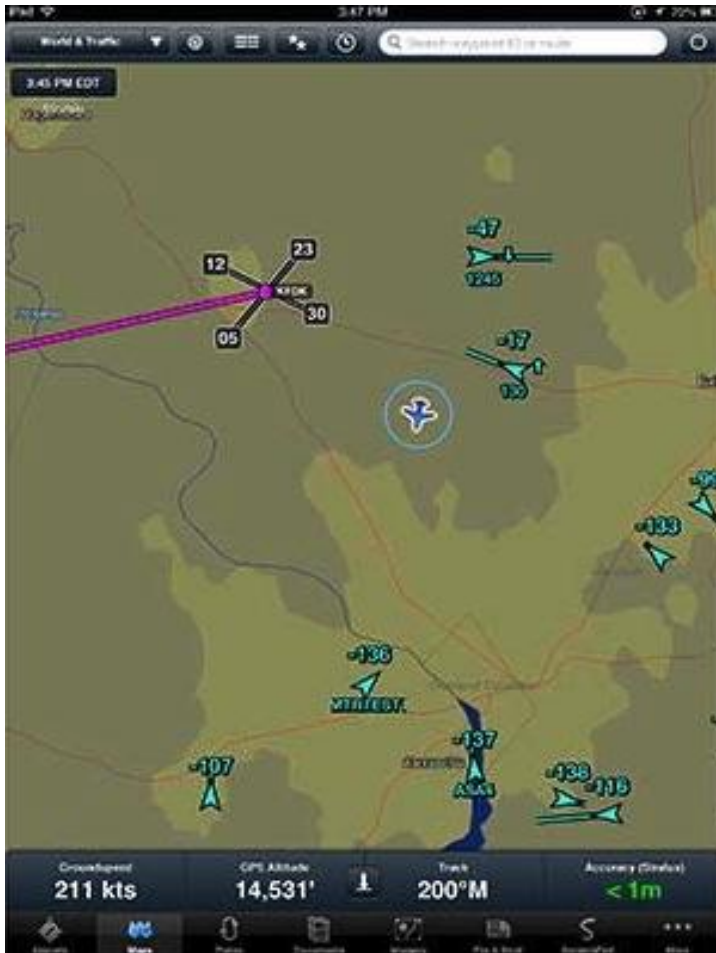
- Weather and SSR Traffic to the Cockpit
- Affordable Reduction of Controlled Flight into Terrain (CFIT)



# Benefits to the community

## Foreflight and Stratus – ADS-B In

- In flight traffic and terrain
- Subscription free weather and METARs





# Concerns

- Costs are currently at minimum of \$5k for GA aircraft
- Must be panel mounted and supplemental type certificate issued (problem for experimental class)
- Technology is new and FAA is over budget with installation, training, and maintenance procedures.
- “Always on” means that the FAA could be technically always monitoring

# Collision Avoidance with ADS-B



# Questions?

- Additional Resources Available:
  - <http://www.faa.gov/nextgen/programs/adsb/>
  - <http://www.aopa.org/Advocacy/Air-Traffic-Services,-a-,Technology/Air-Traffic-Services-Brief-Automatic-Dependent-Surveillance-Broadcast-ADS-B>
  - <http://www.gliderpilot.org/FLARM-About-Transponders-And-ADSB>