

Civil Air Patrol

2017 CAP SUMMER CONFERENCE

31 Aug - 2 Sep 2017
San Antonio, TX





ADS-B



**ADS-B Mandate
1 January 2020**

Automatic Detection Surveillance - Broadcast



ADS-B Update

- Today CAP has 110 aircraft equipped with ADS-B
- Increase of 4 over last week
- 51 currently being installed





Benefits of ADS-B

- **Improved Safety**
 - **Flight Information Service- Broadcast (FIS-B)**
 - **Graphical Weather**
 - **NOTAMS**
 - **Text Based Information**
 - **Traffic Information Service- Broadcast (TIS-B)**
 - **Provides Altitude, Ground Track, Speed and Distance**



Improved Safety





Improved Safety

- TIS-B Traffic
- Foreflight Synthetic Vision





Benefits of ADS-B

- **Situational Awareness**
 - **Locate surrounding aircraft and graphic weather**
 - **Similar to ATC view**
 - **Provides information such as TFR's or closed runways**
 - **Provides ground based flight tracking in ADSB coverage areas**
- **Search and Rescue**
 - **Highly precise GPS surveillance**
 - **ADS-B Out transmits every one second**
- **Long Term Cost Savings**
 - **XM Weather Subscription No Longer Needed**



Flight Tracking

CAP3205
Private owner

AVL ASHEVILLE
EDT (UTC-04:00)

N/A

DEPARTURE	ARRIVAL
SCHEDULED -	SCHEDULED -
ACTUAL 10:27	ESTIMATED -

TYPE (C182)
Cessna 182T Skylane

REGISTRATION	MODES CODE
N405CV	A48F7A
SERIAL NUMBER (MSN)	AGE
18282439	N/A

Recent N405CV flights

CALIBRATED ALTITUDE	VERTICAL SPEED
3,800 ft	+64 fpm
GPS ALTITUDE	TRACK
4,050 ft	94°

Speed & altitude graph

GROUND SPEED	TRUE AIRSPEED
103 kts	N/A
INDICATED AIRSPEED	MACH
N/A	N/A

WIND	TEMPERATURE
N/A	N/A

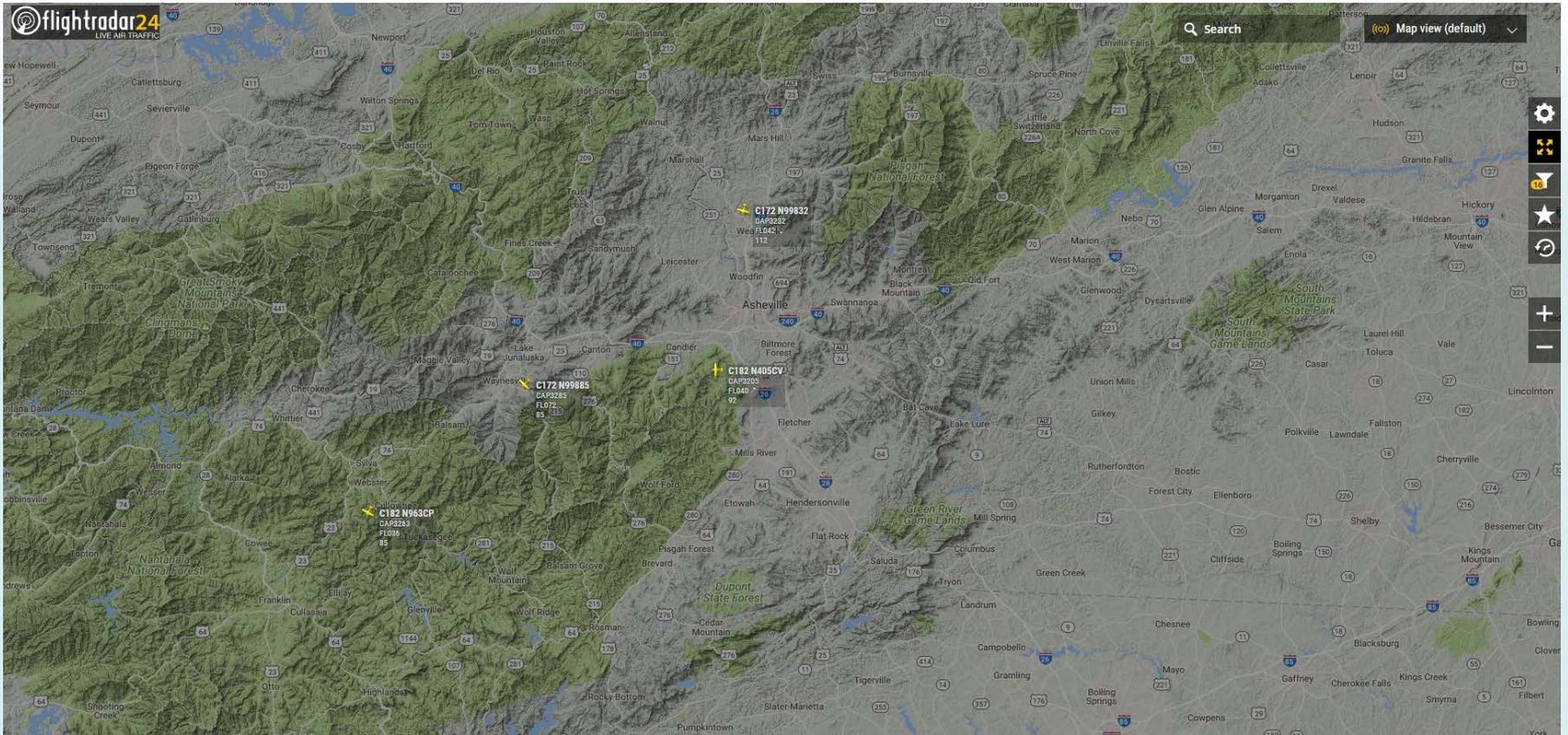
FIR / IIR
ATLANTA

RADAR
T-KAVL6

SQUAWK	LATITUDE	LONGITUDE
1200	35.5357	-82.8495



Situational Awareness





ADS-B Solutions

Garmin GTX345 Transponder

All-inclusive 1090 MHz ADS-B “Out” Transponder Solution

- Satisfies NextGen equipage requirements for ADS-B “Out”
- 1090 MHz output enables aircraft to operate at any altitude, in any airspace
- Combines Mode S Extended Squitter (ES) transponder and optional WAAS/GPS position source in a single unit
- Useful display features include flight time, count-up and count-down timers, plus current pressure altitude readout
- Easy replacement for our existing transponder, with common 1.65-inch tall form factor





ADS-B Solutions

Garmin GTX345 Transponder





ADS-B Solutions

Appareo Stratus ESGI

Stratus ESG (ADS-B OUT)

- TSO'd certified 1090 MHz ES transponder
- Built-in WAAS/GPS position source
- GPS antenna included in kit

Stratus 2i (ADS-B in)

- Non-certified receiver designed for Stratus ESG
- Connected to Stratus ESG
- Backup AHARS
- Integrates with ForeFlight on iPad or tablet
- Competitively price





Outfitting Your Wing Aircraft

- Receive quotes from local Garmin approved Avionics Service Centers
 - Recommendation: Located with Consolidated MX facility
- Receive approval from NHQ to use the shop for all installation
- Request the GTX345 (panel mount) or GTX 345R (remote mount) from NHQ
 - Submit CAPF176
 - 20 tach hours or 30 days from the date of the scheduled installations
- Advise the shop that the unit has been ordered and to be on the lookout for the unit
- Conduct the installation



Questions