



## ***Corporate Webinar Series***

***“Choosing a Traffic System for Your Aircraft”***



# *Avidyne's Vision*

To dramatically change the aviation industry through:

- Commitment to fundamentally simple & intuitive operation.
- Development of significant safety enhancements.
- Uncompromising performance.

**Avidyne is “Flying Made Simple<sup>®</sup>”**



# Avidyne's Entegra Product Line



## **Entegra Integrated Flight Deck Series**

- Entegra Release 9
- Entegra
- FMS900w



## **Entegra Flight Control Series**

- DFC100
- DFC90



## **Entegra MFD Series**

- EX5000
- EX600
- MHD300



## **Entegra Traffic Series**

- TAS600
- TAS605
- TAS615
- TAS620



## **Entegra Wx Series**

- MLB700
- TWX670
- MLX770



# *Do I need a Traffic System?*

- Mid-air collisions are a growing concern
- Higher traffic volumes, not just at major metro airports
- More airplanes operating in same airspace
- Expansion of regional hubs
- Uncontrolled airports
- Increasing use of helicopters
  - MED-EVAC
  - TV/News Gathering
  - Fire Control
  - Paramilitary
  - Law Enforcement/ National Security



# *Accident & Statistical Data\**

- NASA averages 577 pilot reports of near in-flight collisions annually
- US civil aviation averages 15.6 mid-air collisions each year
- Failure to “See & Avoid” cited in 94% of all incidents
- VFR pilots spend about 50% of their time on outside traffic scan during cruise, and 40% during arrival/departure
- Risks are greatest between fast moving and slow moving aircraft



\*Reference: Jan 2007 B&CA “Blinded by See and Avoid” by Patrick Veillette, Ph.D.



# PIC and ATC responsibility

- FAR 91.113 states:

- *“When weather conditions permit, regardless of whether an operation is conducted under instrument or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to “see and avoid” other aircraft.”*



# *PIC and ATC responsibility*

- AIM Sections 5-5-8 and 5-5-10 state:
  - Pilot
    - “Regardless of type of flight plan or whether or not under the control of the radar facility, the pilot is responsible to see and avoid other aircraft, terrain and obstacles.”
    - “Does not expect to receive radar advisories on all traffic.”
    - “Be aware that the controller may be occupied with higher-priority duties and unable to issue traffic information for a variety of reasons.”
  - Controller
    - “Provides radar traffic information to radar-identified aircraft operating outside positive control airspace on a workload-permitting basis.”
    - Issues safety alerts to aircraft under their control if aware the aircraft is at an altitude believed to place the aircraft in unsafe proximity to terrain, obstructions, or other aircraft.”

# *'See & Avoid' is solely PIC responsibility*

- Advisory Circular 90-48C suggests:
  - The total time required by pilot to...
    1. identify an approaching aircraft
    2. Recognize a collision course
    3. Decide on an action
    4. Execute that action
    5. And allow the aircraft to respond....is around 12.5 seconds:



# *‘See & Avoid’ is solely PIC responsibility*

- MIT-Lincoln Lab Study showed that:
  - VFR pilots given a ‘TCAS-type’ traffic advisory
    - were able to visually acquire traffic 86% of the time
    - Compared with 56% when no traffic advisory was available
    - ...and that’s in “severe clear VFR”
  - Mitigation strategies include having a reliable altitude-encoding transponder and affordable, reliable collision avoidance technologies in all GA aircraft, as the NTSB recommended in 1987
  - On-board traffic systems provide you with a “second set of eyes” in the cockpit for an added measure of safety.

\*Reference: Jan 2007 B&CA “Blinded by See and Avoid” by Patrick Veillette, Ph.D.



# *Factors when Choosing a Traffic System*

- Safety is the foremost concern when choosing a traffic system for your aircraft.
- Ease of Installation
- Functionality
- Price
  - Acquisition cost
  - Installation Cost



# Choosing a Traffic System

Five technologies for traffic detection & alerting

1. TCAS
2. TAS
3. Passive
4. TIS
5. ADS-B



# Choosing a Traffic System

- **Traffic Alert and Collision Avoidance System (TCAS)**
  - TCAS II – Active interrogating system issuing traffic alerts (TA) and resolution advisories (RA) TSO C119
    - Mandated for air transport category aircraft
    - Requires dual Mode S Transponders
    - Very Expensive (>\$150K)
    - aka 'ACAS' – Airborne Collision Avoidance System – ICAO
  - TCAS I – Active interrogating system issuing real-time traffic alerts (TA) TSO C118
    - Primarily found on Turboprop aircraft and smaller jets
    - Heavy & Expensive (~\$25K → \$65K)
    - >10 passengers



**Honeywell**  
CAS 67A TCAS II



**Honeywell**  
CAS 66A TCAS I



**Garmin**  
GTS850 TCAS I



# Choosing a Traffic System

- **TAS - Traffic Advisory System (TAS)**  
(i.e. Avidyne TAS600, Garmin GTS800, Honeywell® KTA870, L-3 Skywatch®)
  - TAS systems meet FAA TSO C147 specifications
  - TAS systems actively Interrogates threat aircraft transponders for reply
  - TAS is not dependent on “third party interrogation”
  - TAS provides “real-time” collision alerts
  - TAS provides up to a 30-second warning at up to 1200 knot closure (same as TCAS I)



**Avidyne**  
TAS600  
TAS605  
TAS615  
TAS620



**Garmin**  
GTS800  
GTS820



**L-3**  
Skywatch 497  
Skywatch 899HP



**Honeywell**  
KTA870



# Choosing a Traffic System

- **Passive Traffic Detection Devices**  
(such as early TCAD systems & Zaon Portables)
  - Transponder-based technology
  - Passive reception – relies on 3rd party interrogation
  - Receiver only, rarely provides bearing information
  - Poor range/azimuth performance
  - Virtually ineffective outside of radar coverage areas
  - Some compare it to yelling “Look Out” in a dark room



TCAD8000



ZAON Portable



# Choosing a Traffic System

- **Traffic Information Service (TIS)**
  - Utilizes Mode-S transponders only  
*(TIS not available outside continental US)*
  - Datalink information received from select Approach Radar facilities only
  - Available within 55 nm of Terminal Mode S Radar Sites
  - Not available on en route radars
  - Information susceptible to data loss due to “line-of-sight” reception
  - Not intended specifically for use as collision avoidance
  - Information delayed 5-15 seconds based on radar interrogation “sweep”
  - Not real time
  - Phase out of TIS-capable Ground Stations already underway



# Choosing a Traffic System

- **Automatic Dependent Surveillance-Broadcast (ADS-B)**
  - “ADS-B Out” sends aircraft position via digital datalink along with airspeed, altitude, and intent (aircraft is turning, climbing, or descending, etc).
  - Does not replace transponder
  - Implementation still in its infancy and geographically limited
  - Technology is just now been defined regarding 1090MHz versus UAT transceiver hardware.
    - Above FL180, must use international 1090 MHz Extended Squitter (ES) Mode S datalink
    - Below FL180, operators may use 1090ES or the general aviation 978 MHz Universal Access Transceiver (UAT) link.
  - Creates issue of redundancy (or lack thereof)
    - ADS-B relies on GPS for both navigation and surveillance
    - Loss of GPS results in pilot loss navigation capability and air traffic controllers loses sight of traffic
  - ADS-B Out mandated for 2020

Trig TT31  
E.S. Transponder

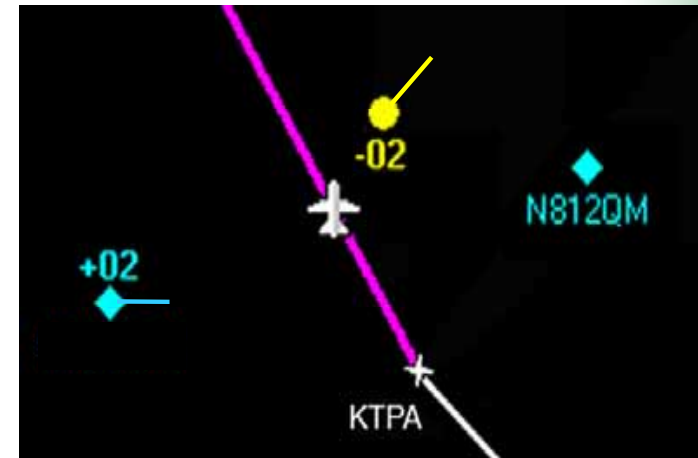


Garmin GDL90  
ADS-B UAT



# TAS600A Series w/ ADS-B In

- Upgrade for TAS600 Active Traffic Systems to accept “ADS-B In”
  - Allows for composite display of *ADS-B* traffic as well as real-time on-board TAS traffic on currently-compatible displays
  - Uses 1090MHz Band
  - Provides dual-antenna diversity as defined by DO-260B
  - Complements “ADS-B Out” handled by compatible transponder & WAAS GPS
- We are accepting no-obligation reservations now to lock in \$2,000 upgrade cost at: <http://www.avidyne.com/landing/tas600-adsb.asp>
- Availability expected in 2011



Dual-Antenna TAS600 Series  
(TAS600/605/615/620)

Provides precision and extended range of ADS-B with the added protection of independent active-traffic system.



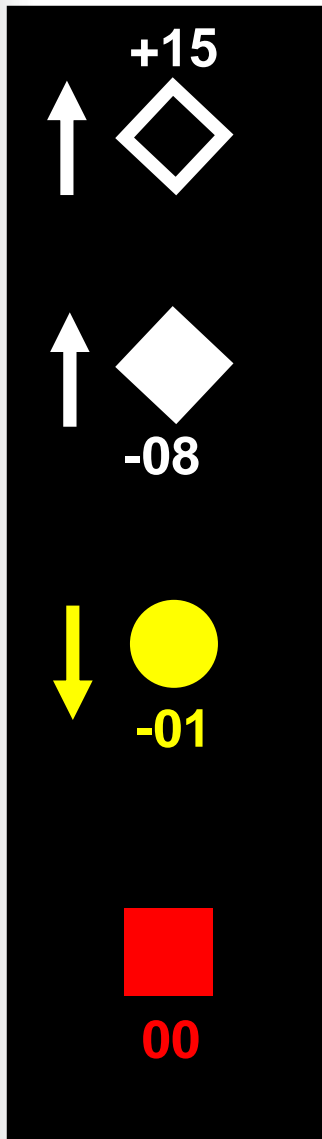
# *Choosing a Traffic System*

## **ADS-B Summary**

- Mandate for ADS-B 'OUT' is 2020
- Currently No Mandate for ADS-B 'IN'
- 1090MHZ ES required Above FL180
- 978MHZ UAT or 1090MHZ ES required below FL180
- 978MHZ Req'd for FREE services such as Wx
- ADS-B 'IN' will provide longer-range traffic advisory with greater precision
- All Avidyne TAS600-Series systems are fully upgradeable for ADS-B 'IN'
- Avidyne does not currently make an ADS-B 'OUT' product but additional ADS-B Announcements will be forthcoming.
- Active-surveillance TAS is viable even in ADS-B world.



# Traffic Symbolology



- **Non-Threat “Other Traffic” (OT)**
  - Open White (or Cyan) Diamond
  - Altitude is greater than  $\pm 1200$  feet
  - Distance is beyond 6 nm range, not yet a threat
  - Arrow denotes climb (or descent) of 500 feet per minute or greater
- **Proximity Alert (PA)**
  - Filled White (or Cyan) Diamond
  - Altitude is within  $\pm 1200$  feet
  - Distance within 6 nm range, not yet a threat
  - Arrow denotes climb (or descent) of 500 feet per minute or greater
- **Traffic Alert (TA) – TCAS & TAS**
  - TA is indicated as a yellow circle
  - Traffic with calculated intercept course for altitude and direction becomes a TA
  - Automated voice alert based on time to closure rate
  - TA maximum alert is 30 seconds for TCAS I and TAS, 45 Seconds for TCAS II
  - TA not available with TIS
- **Resolution Advisory (RA) – TCAS II ONLY**
  - RA is indicated as a red square accompanied by vertical maneuver command on RA/IVSI
  - Intruding traffic is projected to be a collision threat within 30 seconds
  - Automated voice alert to “climb,” “descend” or “monitor vertical speed”
  - Automatically coordinates with other TCAS II-equipped aircraft via Mode S



# *Choosing a Traffic System*

- Safety is the foremost concern when choosing a traffic system for your aircraft.
- Other concerns include price, functionality, installation costs, and upgradeability
- Avidyne's TAS600 Series are the most safe and economical TAS systems on the market today.
- TAS600's dual-antenna architecture is fully upgradeable for ADS-B IN
- TAS600 Systems bring affordable active-interrogation collision avoidance to a wide variety of general aviation aircraft.



# Avidyne Introduced Two New TAS Systems

...and reduced the price point on TAS600

- Two new Traffic Advisory Systems, the **TAS605 & TAS615**.
- Reduced price on entry-level TAS600
  - Now only **\$8,490**



New TAS605 & TAS615 offer higher service ceilings for use in King Airs and include Heading input for Helicopter applications.

- Avidyne continues to offer the *smallest, lightest, and most affordable* Active Traffic systems available for GA aircraft.

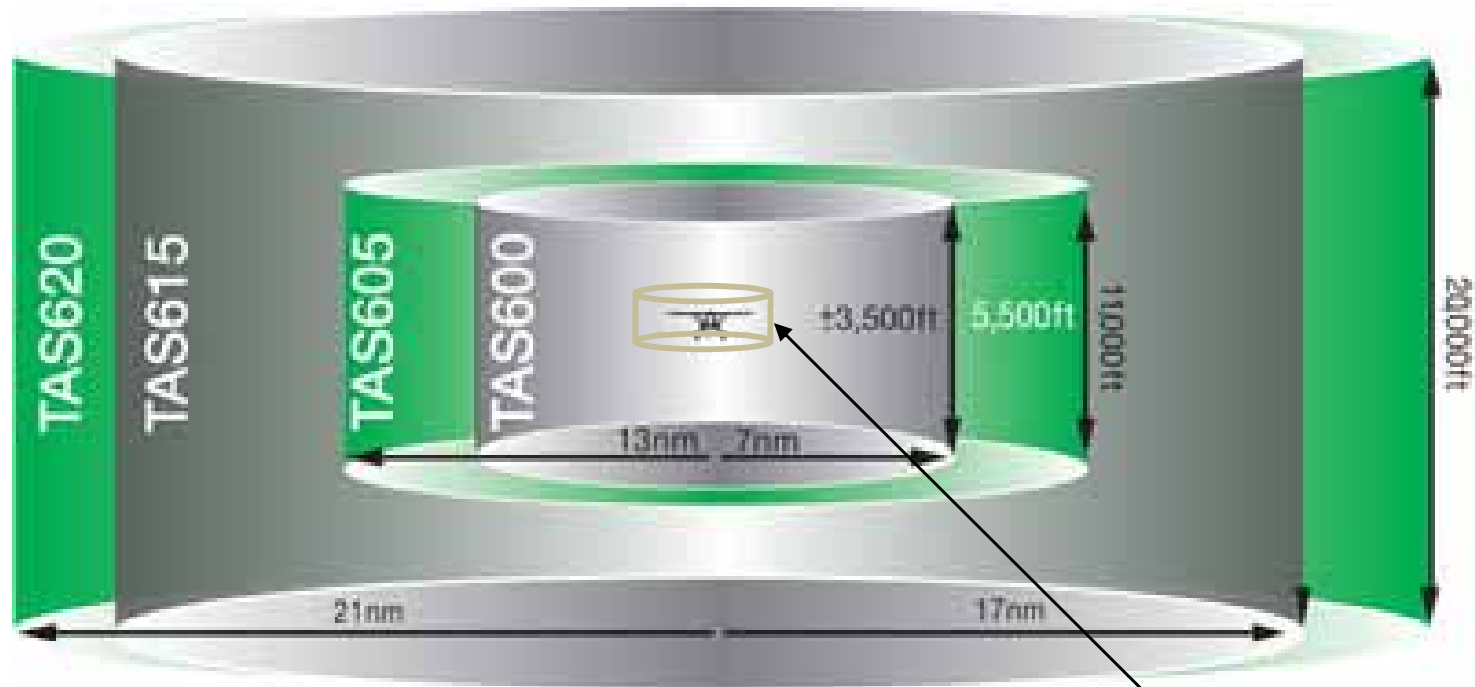
# TAS600 Series Overview



Four different systems for the type of aircraft you fly.

	TAS600	TAS605	TAS615	TAS620
List Price	<b>\$8,490</b>	<b>\$10,990</b>	<b>\$14,990</b>	<b>\$20,990</b>
Range	7nm	13nm	17nm	21nm
Rel. Alt.	±3,500ft	±5,500ft	±10,000ft	±10,000ft
Service Ceiling	18,500ft	55,000ft	55,000ft	55,000ft
Heading	No	Yes	Yes	Yes
ADS-B Upgradeable	Yes	Yes	Yes	Yes
Target Market	<ul style="list-style-type: none"> <li>• Price sensitive customers</li> <li>• Single-engine piston</li> <li>• Makes active TAS available for virtually ANY light GA airplane</li> </ul>	<ul style="list-style-type: none"> <li>• Mid-Performance single-engine pistons</li> <li>• Helicopters</li> <li>• Price Sensitive Turbo operators</li> </ul>	<ul style="list-style-type: none"> <li>• High Performance singles &amp; twins</li> <li>• Turbo Props</li> </ul>	Top of the line <ul style="list-style-type: none"> <li>• Twin Turbines</li> <li>• Light Jets</li> </ul>

# Dual-Antenna TAS600 Series



## TAS600

- Range 7nm
- Vertical Range  $\pm 3,500$  ft
- 18,000ft

## TAS605

- Range 13nm
- Vertical Range  $\pm 5,500$  ft
- 55,000ft

## TAS615

- Range 17nm
- Vertical Range  $\pm 10,000$  ft
- 55,000ft

## TAS620

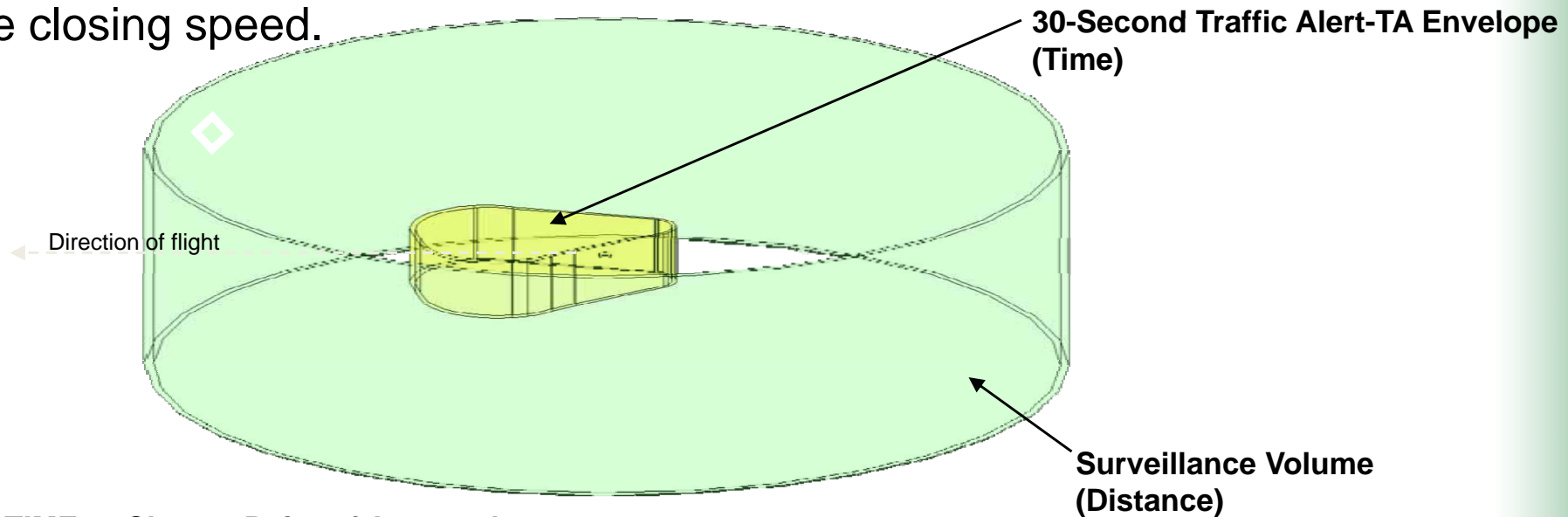
- Range 21nm
- Vertical Range 10,000 ft
- 55,000ft

$\pm 800$ ft  
.55nm

# Traffic Terminology

In collision avoidance, **Time** to Closest Point of Approach (CPA) is more important than **Distance** to the CPA.

Tau is the time in seconds to CPA, and is equal to the slant range, divided by the closing speed.



# τ

**Tau – TIME to Closest Point of Approach**

TA Thresholds	TAU (Seconds)	Range (nm)	Altitude Separation
Altitude Reporting Intruders	<30	<0.55	<800 feet
Non Altitude Reporting Intruders	<25	<0.20	N/A

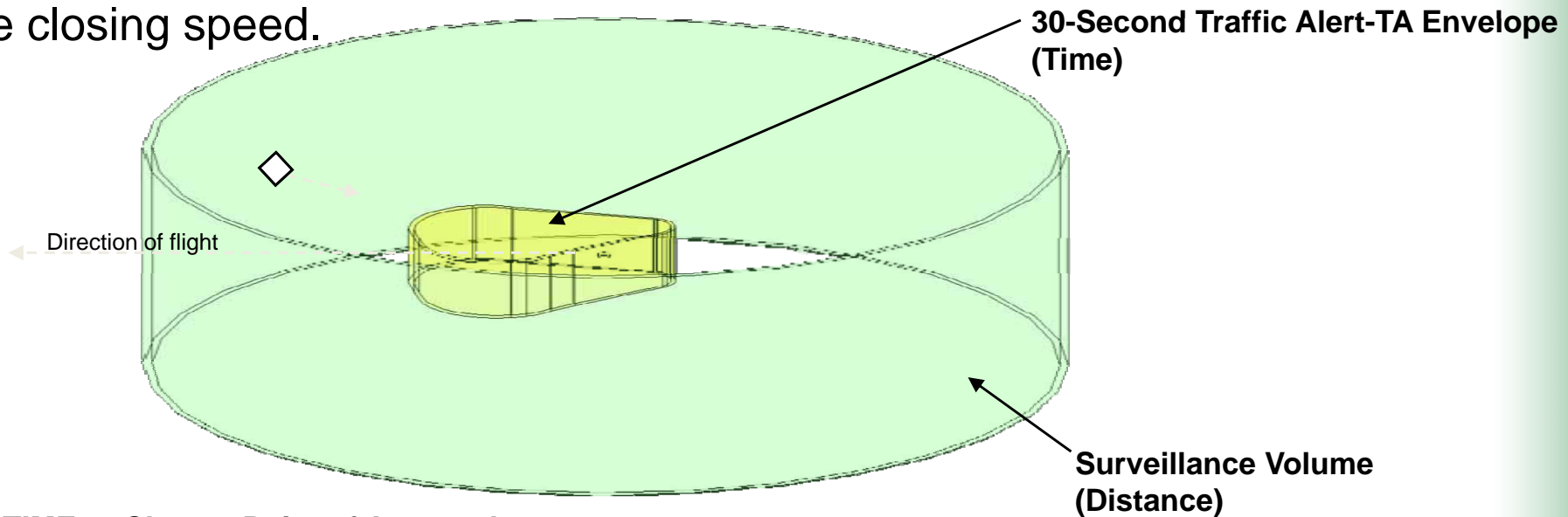
TAS600 7nm  
TAS610 12nm  
TAS620 21nm



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**Surveillance Volume (Distance)**

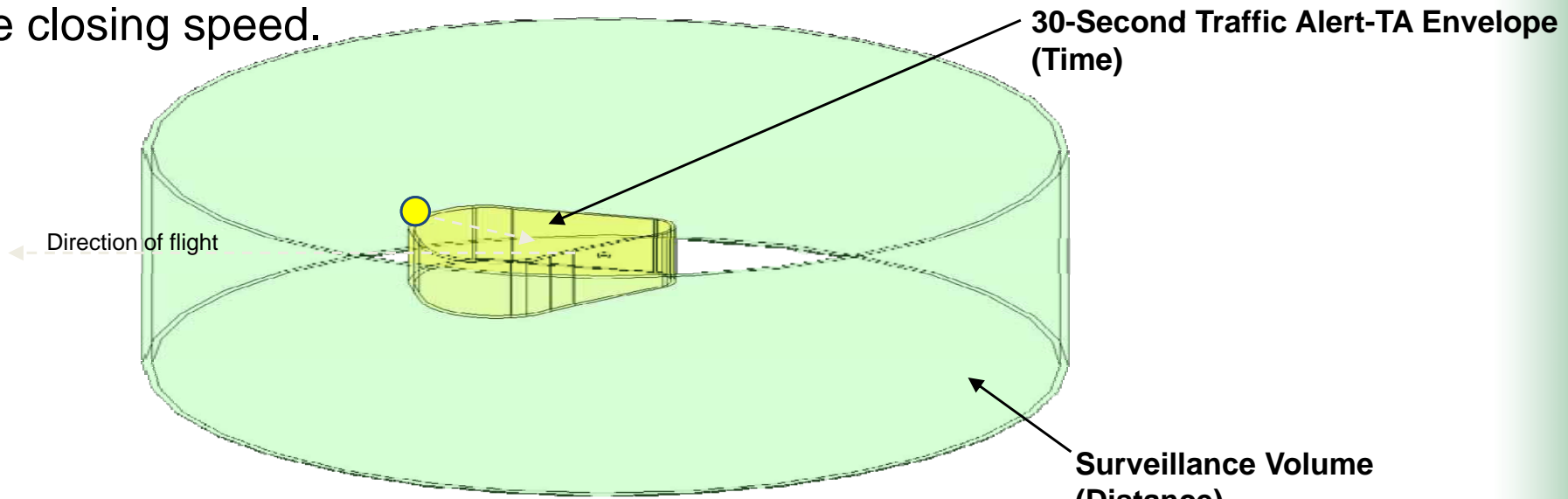
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**Surveillance Volume (Distance)**

TAS600 7nm  
TAS610 12nm  
TAS620 21nm



# TAS600 System Components

Transponder Coupler

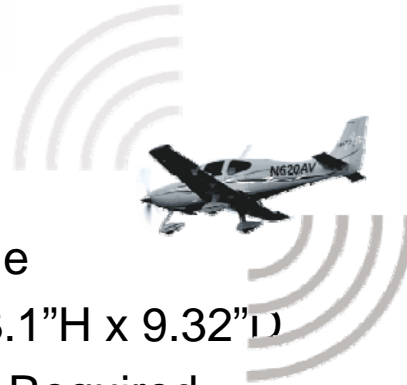
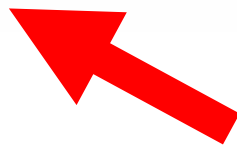


Top & Bottom Antennas



TAS Processor Processor

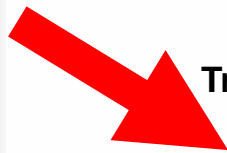
- Tracks 50 Aircraft
- Smallest & Lightest TAS Processor Available
- Weight 6.8 lbs. and Dimensions 7.25"W x 3.1"H x 9.32"D
- Sealed Processor and No External Cooling Required
- Qty. 4 – RS-232 Ports to allow multiple display interfaces
- ARINC 429 output for multiple display interfaces



Traffic Display



# TAS600 System Components



Transponder Coupler



Top & Bottom Antennas



TAS Processor



Traffic Display

## Transponder Coupler

- Prevents host aircraft from detecting it's own transponder signal



# TAS600 System Components

Transponder Coupler



TAS Processor

Top & Bottom Antennas



Traffic Display



## Top & Bottom Antennas

- Patented – Directional 4-Element Technology
- Top and Bottom Antennas – “Like the big guys”
- All Airline TCAS systems have dual antennas
- Reduces shadowing & improves tracking compared to single antenna systems



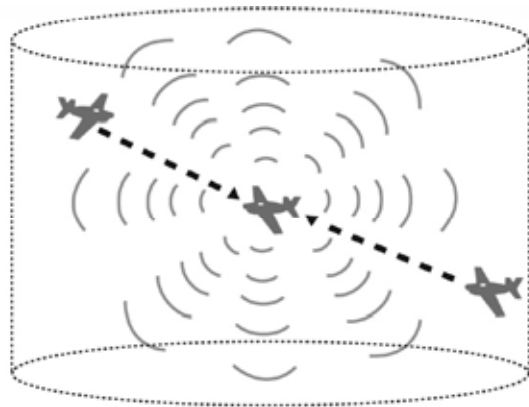
# TAS600 System Features

- Advantages of Dual Antenna system



## Single-antenna systems

The interrogation signals from single-antenna systems may not always receive replies due to airframe shadowing, or they can miss replies from aircraft beneath the host aircraft.



## Patented Top and Bottom Antennas

Avidyne's TAS600 sends out interrogation pulses and listens for replies from other aircraft 360° around the host aircraft.

# TAS600 System Features

## –Heads-Up Audible Position Alerting™

- Target Bearing Annunciation
- Target Relative Altitude Annunciation
- Target Range Annunciation



*“Traffic, One O’clock! Low! Two Miles”*

Avidyne pioneered this concept of having a TAS system that provides ATC-like Callouts.



# TAS600 System Features

- N-Number & Squawk Code Display
- Ground Mode & Weight on Wheels input
  - Eliminates Nuisance Alerts
- Approach Mode
  - (with appropriate display or Rad Alt input)
  - Eliminates nuisance Alerts
- Most Display interfaces including:
  - Entegra, EX500, EX5000, MHD300 (3-ATI)
  - Garmin G1000, 400/500-series, MX20, GMX200,
  - Honeywell KMD550/850
  - Sandel, Collins, Chelton, Meggitt, Sagem, Universal, Rogerson Kratos + others.



Optional ATD150 provides Mute/Update & Approach mode selection



# Traffic System Comparison

	Avidyne TAS600	Avidyne TAS605	Avidyne TAS615	Avidyne TAS620	Skywatch® 497	Skywatch® HP	Honeywell KTA 870	Garmin GTA800	Garmin GTA820	Garmin GTA850
<b>Suggested List Price</b>	<b>\$8,490</b>	<b>\$10,990</b>	<b>\$14,990</b>	<b>\$20,990</b>	<b>\$15,990</b>	<b>\$20,990</b>	<b>\$24,690</b>	<b>\$9,995</b>	<b>\$19,995</b>	<b>\$23,495</b>
<b>Active Interrogation</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Voice Annunciation</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Audible Position Alerting™ or equivalent</b>	Yes Standard	Yes Standard	Yes Standard	Yes Standard	Optional VIP	Optional VIP	No	Yes	Yes	Yes
<b>Top and Bottom Directional Antennas</b>	Yes	Yes	Yes	Yes	No	No	Yes	Optional (+ \$1,085)	Optional (+ \$1,085)	Optional (+ \$1,085)
<b>Altitude Alerting</b>	Yes w/ATD150	Yes w/ATD150	Yes w/ATD150	Yes w/ATD150	No	No	No	No	No	No
<b>Range</b>	7nm	13nm	17nm	21nm	11 nm	35 nm	40 nm	12nm	40nm	40nm
<b>Number of Targets Displayed</b>	30 using Arinc 429, 9 using RS-232				10	10	30	30	30	30
<b>Number of Targets Tracked</b>	50	50	50	50	30	35	60	60	60	60
<b>Ground Mode</b>	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
<b>Approach Mode</b>	Yes w/ATD or MHD	Yes w/ATD or MHD	Yes w/ATD or MHD	Yes w/ATD or MHD	No	No	No	No	No	No
<b>Yoke Mount Mute</b>	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
<b>N-Number Capability</b>	Yes	Yes	Yes	Yes	No	No	No	ADS-B Targets Only	ADS-B Targets Only	ADS-B Targets Only
<b>Target Transponder Ident Squawk</b>	Yes	Yes	Yes	Yes	No	No	No	No	No	No
<b>ADS-B Capable</b>	Yes Upgradeable	Yes Upgradeable	Yes Upgradeable	Yes Upgradeable	No	Yes Upgradeable	No	Yes	Yes	Yes
<b>System Weight</b>	TAS600 is 8.71lbs	~40% lighter than 8.71lbs	Garmin GTS820 8.71lbs	8.7lbs	8.95lbs	8.95lbs	15.20 lbs	12.34lbs	14.24lbs	14.24lbs

Comparison data based on available website & installation manual data and is subject to change.

# Choosing a Traffic System

- **TAS - Traffic Advisory System (TAS)**

- All TAS systems actively Interrogates threat aircraft transponders for reply
- TAS is not dependent on “third party interrogation”
- TAS provides “real-time” collision alerts
- TAS systems meet FAA TSO C147 specifications
- TAS provides up to a 30-second warning at up to 1200 knot closure - (same as TCAS I)



## Avidyne TAS600-Series

Dual antenna system is smallest, lightest, lowest price, best performing.



## Garmin GTS8X0

Garmin 820/850 uses an external power amp that adds weight and increases installation costs and requires Garmin-branded XPDR.\*



## L-3 Skywatch 497 & 899

Single Antenna systems. ADS-B upgrade has been announced only for SKY899HP.



## Honeywell KTA870

Cost prohibitive for light GA. No upgrade to ADS-B has been announced.

\*According to Garmin GTS8XX AML STC Installation Manual 190-00993-05 Rev.3 Oct 2010

# Key TAS Comparison Points: - Avidyne vs Garmin

## Garmin GTS800 Series

## Avidyne TAS600 Series

Garmin GTS820/850 requires <i>Garmin-brand</i> Mode-S transponder (i.e.GTX330) which may add cost.	TAS600 has no specific requirement or restriction for transponder.
Garmin GTS8XX requires <i>Garmin-brand</i> GPS (430/530/480) for ADS-B In, which may add cost.	TAS600 has no specific requirement or restriction for GPS.
GTS820/850 requires the GPA65 power amplifier to be installed close to the top antenna. (difficult and costly)	TAS600 Series does not require an external power amplifier.
GTS8XX antennas each require 4 coax cables (8 total with dual directional antennas and 12 required on GTS820/850 with power amplifier)	TAS600-Series only requires 2 antenna cables per antenna (4 total)
GTS8XX series has no gray code altitude input – requires serial encoder, which means added cost/complexity, weight/ pitot/static test	TAS600-Series accepts standard gray code altitude input
GTS8XX series requires configuration using PC program, down to listing the attenuation of each cable.	PC configuration not required with TAS600 Series.
GTS800 weighs 12.34 lbs GTS820/850 weighs 14.24lbs.with power amp.	TAS600 Series weighs 8.71 lbs (29.1% lighter) TAS600 Series weighs 8.71 lbs (40.5% lighter)

Assumes comparison of dual-directional antenna Avidyne's TAS6XX systems against the Garmin's dual-directional antenna GTSXXX offerings.  
Data based on Garmin GTS8XX AML STC Installation Manual 190-00993-05 Rev.23 Oct 2010



# System Comparisons

	TAS on small aircraft	GTS 800 on small aircraft	GTS820/850 on small aircraft	TAS on large aircraft	GTS820/850 on large aircraft
Processor Weight with tray (lbs)	6.8	10.7	10.7	6.8	10.7
Top Antenna Weight (lbs)	0.75	0.82	0.82	0.75	0.82
Bottom Antenna Weight (lbs)	0.66	0.82	0.82	0.66	0.82
Power Amplifier or Coupler Weight (lbs)	0.5	0	1.9	0.5	1.9
<b>Total Component Weights (lbs)</b>	<b>8.71</b>	<b>12.34</b>	<b>14.24</b>	<b>8.71</b>	<b>14.24</b>
Number of Wires to top	2	4	6	2	6
Number of Wires to bottom	2	4	4	2	4
Number of Wires from amplifier/coupler	1	0	4	1	4
Length of Wires to top (ft)	15	10	10	35	30
Length of Wires to bottom (ft)	15	10	10	35	30
Length of Wires from amplifier/coupler (ft)	2	0	1.5	2	2
Weight of Wire (lbs/ft)	0.04	0.043	0.043	0.05	0.05
Total Wire Weight (lbs)	2.48	3.44	4.56	7.1	15.4
Total System Weight (lbs)	11.19	15.78	18.80	15.81	29.64
GTS is X lbs heavier with coax		<b>4.59</b>	<b>7.61</b>		<b>13.83</b>
GTS is X percent heavier		41.1%	68.0%		87.5%
<b>TAS is X percent lighter</b>		<b>29.1%</b>	<b>40.5%</b>		<b>46.7%</b>
No coax		3.63	5.53		
<b>TAS is X percent lighter</b>		<b>29.4%</b>	<b>38.9%</b>		
GTS is X percent heavier		41.7%	63.6%		

Assumes comparison of dual-antenna Avidyne's TAS6XX systems against the Garmin's dual-antenna offerings.

Data based on Garmin GTS8XX AML STC Installation Manual 190-00993-05 Rev.2 Nov 2009



# Avidyne's TAS600-Series - Proven & Experienced

- Cessna Aircraft
  - Cessna 350 & 400
- Cirrus Aircraft
  - SR20 & SR22
- Diamond Aircraft
  - DA20, DA40 & DA42
- Eurocopter
  - EC135's EC145's, and EC155's
- Extra Aircraft
  - EA500 Spirit
- KAI
  - KC-100
- Piper Aircraft
  - PA-46 Matrix
- Baltimore City Police
  - EC120's
- Baltimore County Police
  - AS350's
- LAPD
  - AS350's
- LA County Sheriff
  - AS350's
- California Highway Patrol
  - Cessna 206's & Helicopters
- US Customs & Homeland Security
  - EC120's, AS350's, Blackhawks, C206, C210, King Airs
- Dekalb County - GA
  - AS350's
- Florida Highway Patrol
  - 6-SEP Cessna's & 1 Navajo
- Ohio State Highway Patrol
  - SEP Cessna's & Eurocopters
- Maryland State Police
  - Eurocopter AS365's
- German Border Patrol
  - EC135's EC145's, and EC155's

...Over 10,000 Avidyne Traffic Systems in service.



*And many more...*



# Top 4 Reasons to Consider TAS600 Series

## • Safety

- The foremost concern when choosing a traffic system for your aircraft.
- Customers want peace of mind and protection for them, their family, their plane
- Active-Surveillance means no dependence on ground-based systems
- Dual antenna systems provide best signal coverage, reduce shadowing

## • Ease of Installation

- TAS600 Series are easiest *dual-antenna* TAS systems to install.
- TAS600 Series does not require a separate power amplifier
- TAS600 Series only needs 4 coaxial antenna cables (versus 8 or 12)

## • Functionality

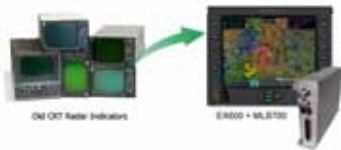
- TAS600 Series has most display interface options (RS-232 & ARINC 429)
- Provides N-Reg and Squawk Code read out of Mode S-equipped Targets
- Ground & Approach Modes eliminate nuisance alerts

## • Price

- At \$8,490, TAS600 Series offers lowest price point available for active-surveillance traffic.
- Four different price/performance points to match the mission profile of the aircraft
- TAS600 Series are smallest, lightest, and most affordable TAS systems on the market today.



# FlySafe Instant Rebates & Q1 Promotions



## The Best MFD

Trade In ANY CRT or legacy MFD for an EX600 and **Save \$2,500!**



## UPGRADE YOUR MFD • EX500→EX600

**Save \$4,000** when you trade in your old Avidyne EX500 for a brand new EX600 MFD with QuickPan!

Upgrade your existing EX500 to an EX600 for \$5,495!



## WORLDWIDE WEATHER and TEXT MESSAGING + FREE Weather Data!

**Save \$2,000** off of an MLX770, plus receive 2 years of free WX data (\$2,500 additional value)

## FLYsafe Instant Rebate Program

**Buy 2 different Avidyne units, get a \$1,000 instant rebate!**

**Buy 3 different Avidyne units, get a \$3,000 instant rebate!**

**Buy 4 different Avidyne units, get a \$5,000 instant rebate!**



# *FlexCare™ Extended Warranty Service Plan*

- Designed to offer owners of Avidyne products a high level of support over the life of their aircraft.
- Priced significantly lower than the previous FLEX Warranty plan that it replaces.
- Begins when your original 2-year new product warranty expires
- Same great benefits and services provided in Avidyne's original new product warranty.
- Includes Platinum Exchange and Advanced Exchange Services
- Choice 1-, 2- or 3-year Plans



# FlexCare™ Pricing

	1 Year	2 Year	3 Year
Entegra 3 Display System	\$ 2,500	\$ 3,750	\$ 5,000
Entegra 2 Display System	\$ 1,850	\$ 2,750	\$ 3,700
EX500/600 & EX5000	\$ 500	\$ 750	\$ 1,000



# Flying Made Simple™

- Full suite of easy-to-use Displays, Traffic and Weather Detection solutions that improve safety
- Committed to making avionics systems that are easier to use, and that make flying safer



Entegra/Envision  
EXP5000 PFD & EX5000 MFD



EX500 MFD



MHD300



TAS600-Series



TWX670



MLB700



MLX770

# Corporate Webinar Series

## **Weather Detection & Avoidance**

1<sup>st</sup> Wednesday

12:00pm EST (1700 UTC)

## **Choosing a Traffic System for Your Aircraft**

2<sup>nd</sup> Wednesday

12:00pm EST (1700 UTC)

## **Choosing an Multi-Function Display**

3<sup>rd</sup> Wednesday

12:00pm EST (1700 UTC)

## **Introducing the DFC90/100**

4<sup>th</sup> Wednesday

12:00pm EST (1700 UTC)

## **Introducing the DFC90/100**

Thursdays

5:00pm EST (2200 UTC)





## ***Corporate Webinar Series***

***Questions?***

