



Choosing MHAS

Multi-Hazard Avoidance System



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Introduction

Hazard Avoidance is a primary tenet for safety of flight in today's busy airspace environment. Complete situational awareness depends on the ability to avoid other aircraft, terrain, restricted airspace, and weather, while staying on course and in full control of your aircraft.

Multifunction Display technology, which Avidyne pioneered in the mid-90s, has evolved to deliver a comprehensive view of your flight situation including your flight plan, weather radar, lightning, color-contoured terrain, man-made obstacles, Special-Use and Class airspace.

On-Board Weather Radar systems have been available for many years for tactical weather avoidance, but are usually range limited and are restricted to high-performance and multi-engine aircraft. Sferics-detection products like older Stormscope® systems provide some measure of strategic weather avoidance, but limitations in bearing accuracy and the inability to display data within 25nm provides limited tactical benefits.

Broadcast Datalink Systems, which have come available recently, are an important hazard avoidance technology designed to give you a strategic view of the weather across the whole country. Satellite-based broadcast datalink systems provide full continental US coverage without geographic gaps and without the altitude restrictions associated with older-generation ground-based systems. With broadcast datalink technology, a wide variety of weather products, are now available in the cockpit in near-real time, providing a cost-effective and practical weather picture. Satellite broadcast systems also have the ability to provide up-to-date graphical Temporary Flight Restrictions (TFRs) to help pilots to stay clear of ever-changing restricted airspaces. As an added feature, Satellite systems also broadcast digital audio entertainment programming which can be especially desirable when you are flying on long trips and when carrying passengers. Broadcast datalink provides a new level of safety and peace of mind for pilots and is now affordable enough to be standard equipment on virtually all general aviation aircraft.

An important safety sensor for avoiding other aircraft is the Traffic Advisory System. TAS is a lighter-weight and more-affordable derivative of Traffic Alert and Collision Avoidance Systems (TCAS) which were mandated for all Air Transport-category aircraft and are also found on virtually all Corporate-class turbine aircraft. Seeing and avoiding other aircraft is paramount to safety of flight, and these lower-cost TAS systems provide a second set of eyes in the cockpit to help you fly more safely.

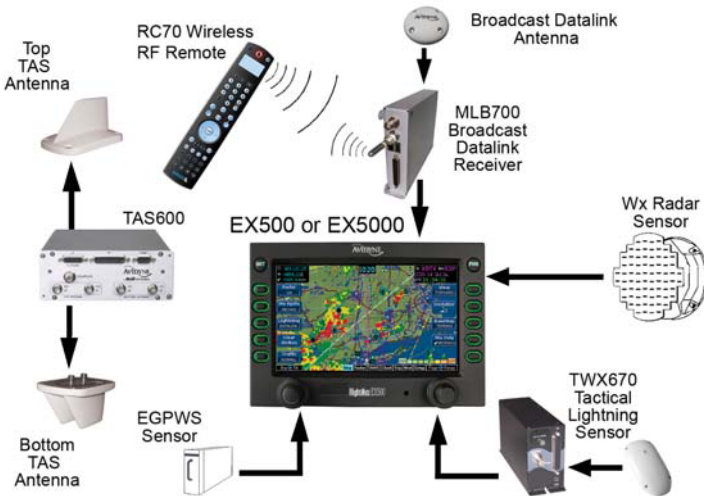
MHAS Overview

MHAS (pronounced Em'hass) is an acronym for "Multi-Hazard Avoidance System." MHAS is a suite of safety sensor products combined with a full function cockpit display to provide pilots with the highest level of situational awareness and safety of flight.

MHAS6000 is Avidyne's Multi-Hazard Avoidance System, which is comprised of an EX500 or EX5000 Multi-Function Display (MFD) and any of Avidyne's new safety sensors including

- TAS600-Series Active Traffic Advisory Systems.
- MLB700 Broadcast Datalink Receiver
- TWX670 Tactical Lightning Sensor*

By bundling this functionality into a full safety-sensor suite, Avidyne is able to provide the very best in situational awareness for the best value in all of general aviation.



MHAS6000 Brings it all together

Integrating and displaying data on the EX500 or EX5000 MFD from all of these safety sensors, including on-board weather radar, lightning detection, traffic advisory systems, terrain awareness systems, and datalink graphical weather, gives you the ability to make more informed decisions, both strategic and tactical, and allowing you to more efficiently, safely and successfully complete your flight.

* TWX670 - Not available yet, as of this printing.

Choosing an MFD

MFD Overview

Avidyne offers two different models of MFD for retrofit in general aviation aircraft: the EX500 and the EX5000. In addition to displaying a full GPS moving map of your flight plan and present position, the EX500 and EX5000 can display data from other sensors in the airplane including datalink graphical weather, lightning, terrain, and traffic. Both systems are available with options to support the control and display of on-board weather radar systems.

The EX500/EX5000 is Avidyne's third generation MFD platform, incorporating everything we have learned since developing general aviation's first stand-alone retrofit MFD in the mid- 90s, the Flight Situation Display, and the industry's first "full overlay-capable" MFD, the FlightMax 750-Series.



**Radar-capable
"4-knob" EX500**



**Standard
"2-knob" EX500**

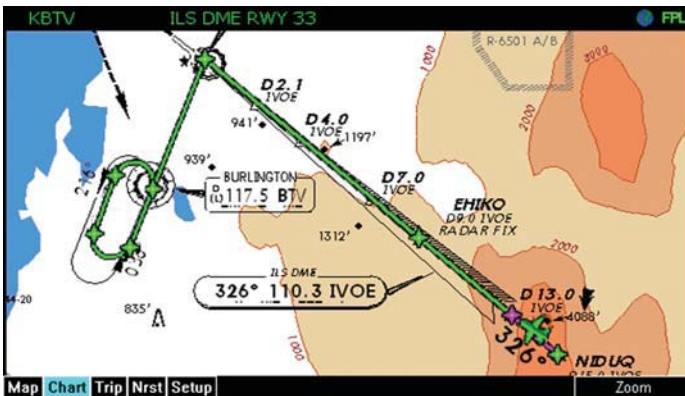
The EX500 fits in a standard 6.25-inch 'mark-width' radio stack. The 4-knob version of the EX500 is designed to replace existing CRT-based radar indicators for any of 19 different radar systems. A 2-knob version is also available for use in single-engine piston aircraft that do not carry an on-board weather radar. The extra knobs on the 4-knob system are dedicated to radar BRG and TILT control, making it much easier to operate than competing radar-capable displays. All other functions are identical between the two.

EX500 radar interfaces include the Bendix/King® RDR2000/2100 and Bendix RDS8X-series digital radar systems, including Vertical Profile™ versions. In addition, the EX500 supports the unstabilized Bendix RDR130/150/160 systems and the fully-stabilized RDR1100/1200/1300 systems. If you are replacing a CRT that is monochromatic, the EX500 will convert it to color. Rounding out the list, the EX500 can also replace the CRT display of Rockwell-Collins® WXR250/270/300-series radars.

The EX5000 is a 10.4-inch diagonal large-screen version of the EX500. The landscape-oriented EX5000 has 9 different radar interfaces including the Bendix/King RDR2000/2100 and Bendix RDS8X-series. All other functionality is essentially the same as the EX500, including support for datalink graphical weather, lightning, terrain, and traffic.

Choosing an MFD

The EX500 and EX5000 user interface makes it incredibly easy to access and display critical flight data. This design philosophy keeps operation simple and consistent by allowing you to select and display what you need on a single easy-to-interpret integrated Map page. As a radar display replacement, the EX500 provides quick and easy access to radar modes, tilt control, and bearing adjust.



CMax Electronic Approach Charts - The CMax Charts option puts full-color Jeppesen® approach plates and airport diagrams right on your EX500 or EX5000 display, including own-ship position and flightplan overlay. CMax approach charts dramatically improve your situational awareness during the most critical phases of flight, and CMax's detailed airport diagrams show runways and taxi ways, making it especially useful when operating on unfamiliar airports.

Choosing an MFD

GS 100kts
TRK 038°

Scale 5nm

Time 17:17:18
UTC 21:17:18

| WPT | BRG | DTK | NM | ETE | ETA | METAR |
|------------|------|------|-------|------|-------|-------|
| To: SJE | 038° | 038° | 38.8 | 0:23 | 17:40 | KWWD |
| Wx: | | | 109.4 | | | KBLM |
| JFK | | 039° | 142.5 | 1:25 | 18:42 | KJFK |
| Wx: | | | 199.7 | | | KOXC |
| Wx: | | | 314.4 | | | KVSF |
| Dest: KBTV | | 019° | 374.3 | 3:44 | 21:01 | KBTV |

METAR Conditions at KBTV
 Cloud: 3500 feet few
 9000 feet scattered
 Weather: none

Age: 10 minutes
 Wind: 260° at 4 kts
 Gust: none
 Visibility: 10SM
 Tmp/Dew: 24°C / 14°C
 Altimeter: 29.82 inches of Hg

Map Radar TAWS Chart Trip **Nrst** Aux Page-Select

This screen shot shows the EX500 Trip Page with graphical METARs for each waypoint in the flightplan. The destination waypoint is highlighted to display the easy-to-interpret plain-English METAR on the bottom portion of the screen. The Display button cycles through all the different weather data pertinent to each waypoint, including METARs, TAFs, Winds Aloft, and Freezing Levels. This method of accessing specific weather data is much more intuitive and easier to access than in any of the competing systems.

Airports Nearest to Destination

| ID | BRG | NM | Freq | Name |
|------|-----|------|--------|-----------------------|
| KBTV | 040 | 0.0 | 118.30 | BURLINGTON INTL |
| VTB | 222 | 7.7 | 122.80 | SHELBURNE |
| KPBG | 321 | 17.3 | 122.70 | PLATTSBURGH INTL |
| B06 | 219 | 18.6 | 122.80 | BASIN HARBOR |
| KPLB | 321 | 20.5 | 122.70 | CLINTON CO |
| KMVL | 092 | 23.5 | 122.80 | MORRISVILLE STOWE ... |
| OB7 | 158 | 25.5 | 123.00 | WARREN-SUGARBUSH |

METAR Conditions at KBTV
 Cloud: 3500 feet few
 9000 feet scattered
 Weather: none

Age: 10 minutes
 Wind: 260° at 4 kts
 Gust: none
 Visibility: 10SM
 Tmp/Dew: 24°C / 14°C
 Altimeter: 29.82 inches of Hg

Map Radar TAWS Chart Trip **Nrst** Aux Page-Select

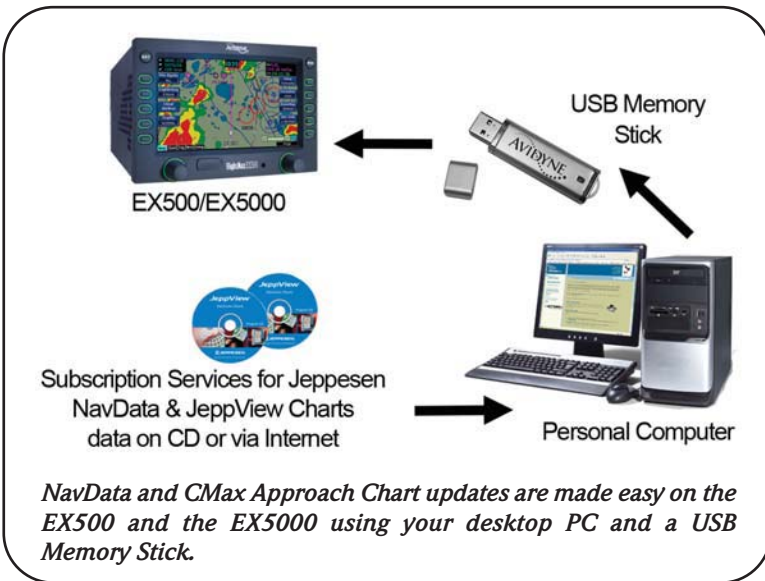
Avidyne's unique "Nearest to Destination" page provides an at-a-glance update of the weather at your destination and surrounding airports. This is particularly helpful when you're a good distance away and the weather is changing. Periodically switching to the NRST page during your flight makes it easy to monitor the weather situation ahead. Chart icons denote airports with Approach Charts in the CMax database, so you can quickly see airports with the best weather and which alternate airport has an ILS. Now you can make strategic decisions about whether to divert much earlier in the flight, saving you time and fuel, while helping you avoid a bumpy ride.

Choosing an MFD



Staying out of harm's way

Temporary Flight Restrictions (TFRs) are updated by the FAA on a regular basis to reflect current military or national security conditions that may be in effect. The EX500 and EX5000 display the most current state of the TFRs from data received via the broadcast satellite network. This screen shot shows the TFR over Disney World™ and the Kennedy Space Center in Florida. Having graphical depictions of TFRs right on your moving map makes it much easier to avoid inadvertent flight into restricted areas.

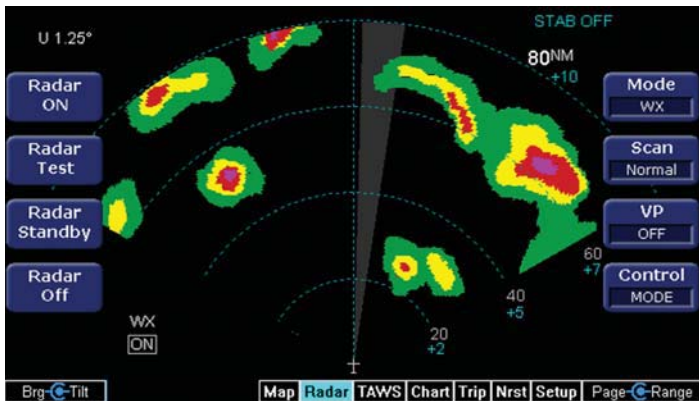


Choosing an MFD

Enhance Your Radar

For radar-equipped aircraft, EX500 and EX5000 systems feature Avidyne's exclusive BeamView™ and TiltView™ capabilities to provide a more useful and intuitive display of radar returns.

BeamView shows the radar's beam width as a function of range, displayed as a “flashlight” beam sweeping across the dedicated radar screen. BeamView makes it easier to discern targets that are separated by a distance of less than a beam width and which may appear on the screen as a single target. BeamView improves your ability to identify cells which are distorted by the natural physics of radar, especially at longer ranges where beam width is greatest.



TiltView computes the relative altitude of the center of the radar's beam at each range and displays this data in cyan adjacent to each range on the display scale in thousands of feet. TiltView allows you to more easily determine cell tops and aircraft AGL altitude, and helps you more quickly determine the altitude of approaching weather. In this example, TiltView shows the center of the beam at 40nm as being 5,000 ft. above the aircraft's current altitude with the antenna is tilted Up 1.25 degrees.

In addition, the EX500 provides an AutoTilt mode even when interfaced with radar systems that previously did not provide this feature. Typically available only on high-end radars, AutoTilt automatically adjusts the antenna tilt angle to compensate for changes in aircraft altitude. AutoTilt eliminates much of the workload associated with normal tilt management. As an example, if you typically fly with a tilt setting that puts ground clutter just off the top of the screen, AutoTilt will maintain this preference, even when you climb or descend to a new altitude.

Choosing Datalink

Broadcast Datalink Weather is probably the most important advancement in this decade for enhancing safety of general aviation aircraft. Highly-detailed and timely aviation weather data services are now being offered via the XM® and SIRIUS broadcast satellite networks. The SIRIUS Satellite Network broadcasts weather provided by WSI, an industry leader in aviation-quality weather. The XM Satellite Network sends weather from Baron WxWorx®. In addition, both SIRIUS and XM offer digital audio programming services for cabin/cockpit entertainment.

Avidyne's MLB700 Broadcast Datalink Receiver is an aircraft Flight Information Services - Broadcast (FIS-B) receiver that meets the requirements of TSO-C157. The MLB700 is designed to provide reception of weather and other data products that assist the flight crew in assessing whether current conditions are suitable to the capabilities of the pilot and the flight characteristics of their aircraft.

With a valid subscription through MyAvidyne.com, the MLB700 receives graphical and textual weather data based on WSI's award-winning InFlight weather service. In addition, the MLB700 has the ability to receive digital audio entertainment, with a valid SIRIUS Satellite Radio subscription, that plays through your aircraft's audio system and is controlled from anywhere in the aircraft by the RC70 Wireless Remote Control.

The EX500 and EX5000 interface with Avidyne's MLB700 Broadcast Datalink Receiver, which can be purchased with or without SIRIUS digital audio entertainment capability. Avidyne MFDs also interface with Heads Up Technology's™ XMD-076/A Receivers.



MLB700 w/RC70 Remote Control

Choosing Datalink



WSI's Meteorological Center in N. Andover, MA

About WSI

The MLB700 uses WSI's award-winning InFlight Weather Service via the SIRIUS Satellite Network. WSI is renowned for their innovative weather products and professional services which satisfy the needs of aviation, media, energy, trading, and utility customers world wide. WSI InFlight was the first satellite broadcast product on the market in 2002. It is now used by thousands of pilots and briefers across market segments, based in Canada and the USA, including:

- The Weather Channel®, WSI's sister company
- Pilots and dispatchers at most airlines and FBOs in the US and internationally, with Pilotbrief and Vector Dispatch products
- The NASA Astronauts in their T-38 trainer fleet
- The US Navy
- Fortune 500 Corporate Flight Departments and Aircraft Owners
- Any General Aviation aircraft using FIS-B/ADS-B today in Alaska (Capstone) and in the CONUS (SafeFlight 21)
- Any Business Aviation aircraft with weather over the Rockwell-Collins Airshow System
- The FAA (Flight Service Stations, Enhanced Traffic Management System, Systems Command Center, ADS-B)
- Most TV stations and cable news channels in the US and internationally
- Most power and electricity traders in North America and Europe
- A large percentage of the major utilities in North America

Choosing Datalink

Key benefits of the WSI InFlight Service include:

Quality: The quality of the weather content, including premium NOWrad®, the long-range lightning data and the extensive quality control WSI performs on its content in general. WSI actually owns the source sensors for many of its weather products such as the United States Precision Lightning Network (USPLN). WSI products are subject to both algorithmic and visual quality control by a staff of professional meteorologists unlike other services that simply rebroadcast public data.

Experience: Because of WSI's broad market reach, WSI is able to leverage the premier services they perform for the FAA and the airlines, and to bring it to a very competitive price to general aviation with this product line.

Value: Avidyne offers two subscription levels for WSI InFlight weather with the MLB700 that have the following advantages over XM:

- Aviation-quality weather from the weather authority the airlines and FAA trust
- You only pay for the Wx products that the EX500 or EX5000 is displaying
- Lower cost for Avidyne's high-end Performance package (\$39.99/mo vs. \$49.99/mo. for XM Aviator)
- Datalink Lightning product included in Avidyne's basic Essentials package (Lightning not included with XM Aviator Lite)
- Access to Pilot Brief Online
- MHAS price packaging

Single Source: WSI provides access to the same information for pilots during all phases of flight – for pilots' official weather briefing using Pilotbrief OnLine and during the flight with WSI InFlight.

Commitment to Aviation: Like Avidyne, WSI is committed to aviation and is committed to growing and enhancing this product line for the long term, including new data products for North America and beyond. Avidyne will be supporting innovative new weather products as they become available.

Choosing Datalink

WSI Pilot Briefing Online™

Professional Aviation Weather Anywhere You Need It

As an added benefit, Avidyne's MLB700 customers also have access WSI's Pilotbrief Online service.

One of the few online weather services that fully complies with the FAA's Qualified Internet Communications Provider (QICP) program, WSI Pilotbrief Online provides access to WSI's award winning briefing services from any Internet-enabled web browser. Pilots can graphically combine aviation weather, airspace notifications and their actual planned route of flight into one interactive workspace to easily evaluate alternatives and make the best pre-flight decisions. To save time, pilots can file their flight plan through WSI Pilotbrief Online and even access their online accounts from any WSI Pilotbrief Pro™ located in the nation's top FBOs. WSI Pilotbrief Online – the standard for professional online weather briefings.

Using any connection to the Internet, whether from home, the office or a hotel, Pilotbrief Online allows you to access your routes and all of the professional aviation weather information necessary for pre-flight planning.

- Professional weather briefing from any Internet browser
- Evaluate aviation weather and NOTAMs in one interactive workspace
- Access your online account from any WSI Pilotbrief Pro system right at the FBO
- FAA Qualified Internet Communications Provider Certified
- Affordable



Choosing Datalink

About SIRIUS Satellite Radio: The Best Radio On Radio™

In addition to datalink graphical weather from WSI, SIRIUS also provides a full slate of fully-digital audio programming, which is now available in your airplane via the MLB700 and the RC70 Remote Control.

With everything from 100% commercial-free music to in-depth sports coverage, plus news, talk and the hottest entertainment - you can always hear exactly what you want on SIRIUS Satellite Radio including:

- The only home of 100% commercial free music. Whether you're discovering new music, or rediscovering songs you haven't heard in years - you'll hear it all on SIRIUS
- Live play-by-play and expert talk from the biggest leagues. NFL®, every game, every week, everywhere. Plus NFL Radio 24/7 news and options from top NFL pros
- 40 games a week from NBA® and College Sports from over 150 schools
- NASCAR® exclusively on SIRIUS starting January 2007
- Entertainment, Comedy and Talk that can't be found anywhere else. From two channels of Howard Stern®, Blue Collar Comedy with Jeff Foxworthy and Larry the Cable Guy® to Maxim® and Playboy Radio®
- Especially for Women. Martha Stewart™ and her team will inspire you 24/7 along with Cosmo Radio, Deepak Chopra™ Wellness Radio, and other exclusive talk show hosts
- World Class News, traffic and weather. Fox®, CNN®, NPR® and BBC®. Local traffic and weather for the top 20 cities

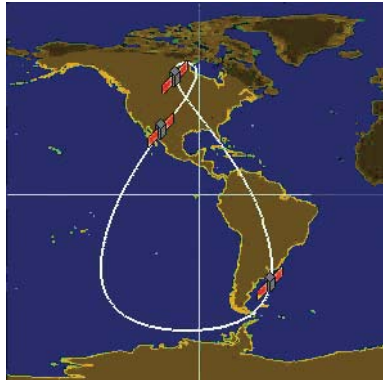


RC70 Wireless
Remote Control

Choosing Datalink

About the SIRIUS Satellite Network

The SIRIUS Satellite Network is comprised of three satellites called Radiosat 1, Radiosat 2, and Radiosat3, which are in a geo-synchronous highly elliptical orbit (HEO). These satellites have a 24-hour orbital period, and the elliptical path of the constellation ensures that each satellite spends about 16 hours a day over the continental United States. The primary uplink facility for SIRIUS is located in Vernon, New Jersey. SIRIUS broadcasts using 12.5 MHz of the S band between 2320.0 and 2332.5 MHz. All three satellites can broadcast directly to the MLB700 receiver, and due to the highly elliptical orbit, two of them are always in view at any given time. The SIRIUS signal is separated into three carriers, one for each for the two satellites in view, and the third for the terrestrial repeater network, used in more populated areas for the automotive market. SIRIUS receivers can decode all three carrier signals at once to achieve signal diversity. Using 3rd-generation SIRIUS chipsets, advanced algorithms, and an innovative Sky-Focused™ antenna, the MLB700 provides enhanced reception and signal processing in all areas.



SIRIUS' three satellites are in a 24-hour geo-synchronous orbit, two of which are always over the continental U.S.

Choosing a Traffic System

Introduction

Mid-air collisions are a growing concern throughout the world. High air traffic volume, once only a concern around congested metropolitan airports, is elevating the risk of mid-air collisions. The expansion of regional hubs, along with increasing use of helicopters in emergency medical service, electronic news gathering, fire control, and paramilitary operations including national security forces is creating higher risk for mid-air collisions. Critical to safe flight is the accurate and timely pilot awareness of potential threat aircraft information. Combining visual and aural alerts provides a higher degree of accurate decision making in high workload situations within the modern flight deck. Dependence on ATC does not guarantee separation. Responsibility for collision avoidance rests solely with the pilot in command (PIC).

Federal Aviation Regulations 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.

Understanding the PIC and the Air Traffic Controller (ATC) responsibility is also critical as detailed in Airman’s Information Manual Section 5-5-8 and Section 5-5-10:

See and Avoid

Pilot –

- 1. When meteorological condition permit, 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 traffic, terrain, or obstacles.*

Controller –

- 1. Provides radar traffic information to radar identified aircraft operating outside positive control airspace on a workload permitting basis.*
- 2. 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.*

Choosing a Traffic System

Clearly, the PIC is solely responsible for collision avoidance.

A recent review* of accident statistical data suggests that the risk of traffic conflicts are actually greatest between a fast moving and a slow moving aircraft. Equally compelling is that in several mid-air accidents, the NTSB determined that the probable cause was “the inherent limitations of the see and avoid concept,” and “underscoring the need for low-cost proximity warning and conflict detection systems.”

- 1. On average, NASA receives 577 pilot reports of near in-flight collisions each year.*
- 2. On average, there are 15.6 midair collisions each year in US civil aviation.*
- 3. Failure to ‘see and avoid’ is cited as the probable cause for 94% of all inflight collisions.*
- 4. Advisory Circular 90-48C suggests that the total time required by a pilot to identify an approaching aircraft, recognize a collision course, decide on action, execute that action, and allow the aircraft to respond as around 12.5 seconds. (Avidyne’s TAS600 traffic systems provide a huge benefit with up to 30 seconds of warning time, more than twice the time required).*
- 5. Private pilots on VFR flights spend about 50% of their time on outside traffic scan during cruise, and only 40% during arrival & departure.*
- 6. Referencing an MIT-Lincoln Lab study: 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.” (Of course, the presence of a traffic display allows pilots to “see” transponder-equipped traffic virtually 100% of the time on their display).*
- 7. Mitigation strategies include having reliable altitude encoding transponders activated at all times on all aircraft, and affordable and reliable collision avoidance technologies in all general aviation aircraft, as the NTSB recommended in 1987.”*

It’s clear that today’s on-board traffic avoidance systems -- which have become more and more affordable -- provide you with a ‘second set of eyes’ in the cockpit for the added measure of safety you need in today’s busy airspace.

**Reference: January 2007 issue of Business & Commercial Aviation titled “Blinded by See and Avoid” by Patrick Veillette, Ph.D.*

Choosing a Traffic System

Deciphering the many different types of traffic systems can be daunting. There are five different technologies currently available for traffic detection and surveillance. Below is a summary of the systems technological differences.

Traffic Collision Avoidance System (TCAS)

- TCAS I – Active interrogating system issuing real-time traffic alerts (TA) – Primarily found on Turboprop aircraft and smaller jets
- TCAS II – Active interrogating system issuing traffic alerts (TA) and resolution advisories (RA)

* Federal Aviation Administration (FAA) mandated in Part 121 aircraft – applications usually found in large business jets & commercial aircraft

Traffic Advisory System (TAS)

(i.e. Avidyne TAS600, Honeywell® KTA870, L-3 Skywatch®)

- Active interrogating system - Not dependent on “third party interrogation”
- Meets FAA TSO-C147 specifications
- Provides up to a 30-second warning at up to 1200 knot closure (same as TCAS I)
- Interrogates threat aircraft transponders for reply
- Provides “real-time” collision alerts

Passive Traffic Detection Devices

- Transponder-based technology
- Passive reception – relies on 3rd party interrogation
- Receiver only, rarely provides bearing information
- Reduced effectiveness outside of radar coverage areas

Traffic Information Services (TIS)

- Utilizes Mode-S transponders only
- Datalink information received from select Approach Radar facilities only
- Not intended specifically for use as collision avoidance
- Information susceptible to data loss due to “line-of-sight” reception
- Information delayed 5-15 seconds based on radar interrogation “sweep”
- Phase out of TIS-capable Ground Stations already underway

Automatic dependent Service - Broadcast (ADS-B)

- Developed as FAA's Safe Flight 21 project
- Supports air-to-air traffic situational awareness, dependant on GPS to determine position
- Implementation still in its infancy and geographically limited
- Technology is still not fully defined regarding 1090MHz versus UAT transceiver hardware. NPRM suggests no mandate until 2020.

Choosing a Traffic System

Three models of TCAS/TAS exist today for air carriers or aircraft owners and operators. All TCAS/TAS systems are transponder based. If a nearby aircraft has a transponder that is not functioning or is in the “OFF” position, then the TCAS system will not detect the threat aircraft.

Three basic components make up the TCAS/TAS systems. The first component is the Antenna system; the second is the Processor; and the third component is the instrument panel Display.



Other Traffic

Proximity Alert

Traffic Advisory (TA)



TAS and TCAS I systems provide three levels of alert. (Shown here on an MHD).

The first level of alert is indicated on the display as an open diamond shape, with the altitude separation indicated between the host and threat aircraft and an arrow indicating if the threat aircraft is climbing, descending, or at the same altitude. This is referred to as Other Traffic (OT). OT is not an immediate threat but is within the surveillance area and the pilot should be aware of existing traffic.

The second level is the Proximity Alert (PA) which is displayed with the same information as OT, with the exception that the diamond is now a solid shape on the traffic display. Both OT and PA alerts are typically cyan on a color display or white on a monochromatic display.

The third level is the Traffic Alert or TA. Traffic with a calculated intercept course for altitude and direction become a TA. When a TA is encountered, the intruder traffic is indicated as a yellow circle. The pilot is also alerted by an automated voice alert that says “Traffic! Traffic!” or Avidyne’s Heads-Up Audible Position Alerting™ announces the threat traffic’s clock position, relative altitude and distance. The alert is based on time to closure rate. The maximum alert is 30 seconds at a maximum 1200-knot closure, which calculates to a ten-mile distance.

If the target aircraft is higher than your altitude, its relative altitude will be displayed above the target with a plus sign (+02 = 200ft above) and if lower, with a minus sign below the target. A direction arrow next to the target indicates that the target is either climbing or descending at a rate of 500FPM or greater.

Choosing a Traffic System

TCAS II provides a similar level of alerts as TAS and TCAS I with the addition of Resolution Advisory or RA. When the TCAS II system detects an imminent intercept course, the intruder aircraft is displayed as a red square and the pilot is audibly instructed to “Climb” or “Descend” and visually directed by the RA/IVSI display with the appropriate vertical speed needed to avert a collision. Both aircraft must be equipped with TCAS II systems to experience an RA.

The three most popular TAS systems available for general aviation aircraft are the Avidyne’s TAS600 Series, the L3 Skywatch systems, and Honeywell’s KTA-870 system. These systems detect intruder aircraft based on the performance guidelines of TSO-C147 for traffic advisory systems. Detection is determined by using modeling algorithms to calculate relative altitude, distance, and bearing of the intruder aircraft. TAS systems include a main Processor and either a top and bottom antenna configuration (TAS600 and KTA-870) or single top-only antenna set-up (Skywatch). It is worth noting that all TCAS I and TCAS II systems utilize top and bottom antennas for optimum traffic coverage and minimal shadowing effects of the fuselage.

Dual-Antenna TAS600 System

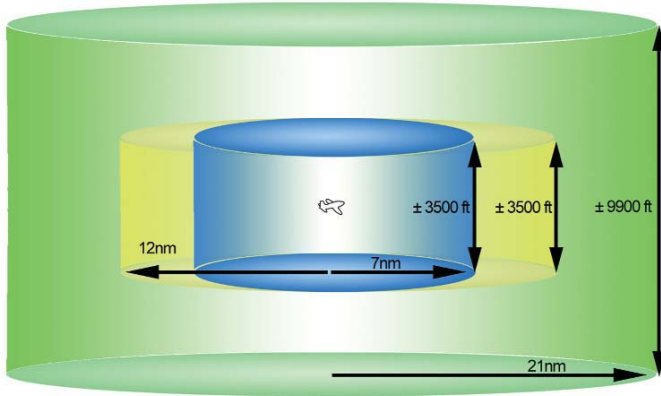
Safety is the foremost concern when choosing a traffic system for your aircraft. Other concerns include price, functionality, and installation costs. In the next few pages we will clearly show you why Avidyne’s TAS600 Series are the most safe and economical TAS systems on the market today.

Avidyne’s TAS600 family of Traffic Advisory Systems (TAS) brings affordable active-interrogation collision avoidance to a wide variety of general aviation aircraft. All TAS600 systems include Avidyne-exclusive features and Ryan Active Surveillance™ (RAS) technology.



Choosing a Traffic System

Avidyne's TAS600 Series includes three models, designed for the type of aircraft you fly:



With the TAS600 series, you can choose the right traffic system for your aircraft based on operating altitude and closure rates (range and speed).

TAS600—Recommended for entry-level, single-engine piston aircraft, the TAS600 features a 7nm range, a 3,500-foot vertical separation maximum and 18,500-foot service ceiling.

TAS610—Recommended for mid-performance aircraft and rotorcraft, the TAS610 features a 12nm range, a 3,500-foot vertical separation maximum and a 25,000-foot service ceiling.

TAS620—Recommended for high-performance aircraft and rotorcraft, the TAS620 features a 21nm range, a 9,900-foot vertical separation maximum and a 55,000-foot service ceiling.

All TAS600 systems offer these additional features:

Patented Top and Bottom Antennas

Like the dual-antenna architecture of more expensive TCAS systems used in Airliners and Corporate jets, Avidyne's top and bottom directional antennas interrogate and receive replies from threat aircraft transponders above and below the aircraft. This dual-antenna architecture is designed to minimize surveillance interference from your own airframe.

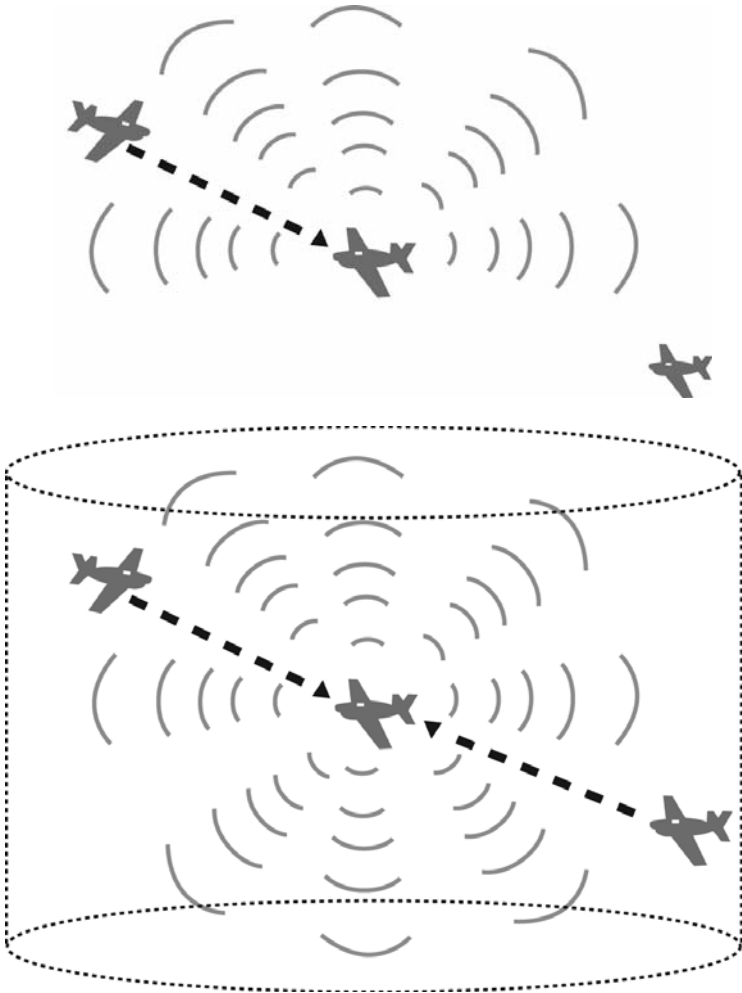


The top antenna provides directional surveillance to the front and aft on the aircraft. The bottom antenna provides directional surveillance to the left and right of the aircraft. This dual-antenna architecture provides greater accuracy for range and bearing resolution of intruder aircraft.

Choosing a Traffic 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.

Choosing a Traffic System

Avidyne's Heads-Up Audible Position Alerting™

Safety is not limited to visual interpretation, which is why Heads-Up Audible Position Alerting™ is incorporated into all TAS600 Series systems. Heads-Up Audible Position Alerting annunciates the threat alert, clock face position, and relative vertical position and distance of any threat aircraft within the surveillance envelope, thus reducing visual overload. With Heads Up Audible Position Alerting, the TAS600 clearly alerts the pilot to an imminent threat:

TRAFFIC! TWO O'CLOCK! HIGH! THREE MILES!

The TAS600 series eliminates the added step of acquiring the intruder aircraft on a display and then visually locating the threat. With the TAS600, you can now simply, HEAR AND ACQUIRE.

Active Interrogation

All TAS600 systems search the sky in real-time in any radar or non-radar environment. The interrogation of ATC, military radar, and other active collision avoidance systems is continuously sent up to 56 times per second by the TAS600 and can receive replies from Mode A, C, or S transponders.

The TAS600, TAS610, and TAS620 are designed to meet the specific needs of each class of aircraft, providing a full 30-second decision time at a closure rate of up to 1200 knots. TAS600 series traffic systems interrogate transponders from nearby aircraft within their respective coverage volume, and provide a warning to the flight crew when the calculated time to closest approach (CPA) of any intruder and the protected area around the aircraft reaches the 30-second threshold.

Avidyne TAS600-Series Features & Functions:

Ground Mode

Ground Mode enables the system to ignore traffic on the ground and mute audio announcement while displaying traffic more than two hundred feet above the ground. This feature is important as the aircraft taxis out, especially at uncontrolled airports. The "Weight on Wheels" mode will automatically enable and disable Ground Mode.

Approach Mode

The Approach Mode, when engaged, permits the TAS600 Series to ignore traffic on the ground during the approach phase of a flight. At times the pilot may desire to "see" traffic during approach, with this in mind, the system was engineered as a pilot selectable option.

Choosing a Traffic System

Weight on Wheels

This is a discrete input which automatically switches the TAS600 system into Ground Mode upon landing, minimizing any distraction from ground traffic. Traffic above the host aircraft is still shown on the multifunction display, without audio warnings. This also allows for continued situational awareness when preparing for departure.

Audio Yoke-Mounted Mute and Volume Control

The TAS600 Series is the only TAS system available with an audio volume control enabling the announcement to be heard by the pilot and crew but not necessarily heard by passengers. Also available is a yoke-mounted mute button which allows the system to be muted when needed. If another Traffic Alert (TA) is detected, the TAS600 system will automatically disengage the mute and announce the threat and updated intruder position.

N-Number Capability

Mode S transponder-equipped aircraft have the ability to transmit their N-number, which can be decoded by the TAS600 system. This number can be viewed on compatible multifunction displays when interfaced to the TAS600 via its RS232 data bus output.

Most Display Options

The TAS600 Series provides industry-standard ARINC 429 and RS232 display outputs and has the most display options available for TAS systems.

With interfaces to the displays of over 15 popular display manufacturers, including Avidyne's Entegra, EX500 and EX5000, the Garmin GNS430/530 and G1000, it's a pretty safe bet that the TAS600 can connect to your display with ease.

Choosing a Traffic System

Why should I install a traffic system on my airplane?

The most feared of all flying incidents is the mid-air collision. Even when we are vigilant in our “See and Avoid” technique, we fear what we can’t control; the occurrence of “the other guy” who might not be as diligent as us. Perhaps the fear is out of proportion to the actual threat, but nonetheless it is regarded one of deadliest flying hazards.

It’s obvious that mid-air collisions happen when they are least expected. The pilot’s responsibility is to visually scan for traffic, and even the best set of eyes can miss a fast-moving approaching aircraft. This presents a real need for a traffic advisory system. Throughout the years, statistics have proven that these systems have decreased the total number of mid-air collisions.

Dare to Compare

Aircraft owners now have the advantage of installing the most technologically advanced traffic advisory system at a very affordable cost. Avidyne has designed the TAS600 Series with safety as the predominant feature. And starting at only \$9,990, the TAS600 is the most affordable active TAS system in the general aviation marketplace.

Competitive traffic systems start at a minimum price of \$15,000 with less features and surveillance capabilities. We encourage you to compare features, functions, technology and value. Consider the TAS600 Series for installation in your aircraft.

With Avidyne’s MHAS Package Pricing, the savings can be considerable when the TAS600 system is bundled with an EX500 or EX5000 MFD and an MLB700 Broadcast Datalink Receiver. Review the full competitive matrix for Traffic, MFDs, and Datalink on the following pages to see what we mean.

Choosing a Traffic System

| Feature | TAS600 | TAS610 | TAS620 |
|--|---------------------------------|---------------------------------|---------------------------------|
| Suggested List Price | \$9,990 | \$14,990 | \$20,990 |
| Active Interrogation | Yes | Yes | Yes |
| Audible Range, Bearing, Altitude, and Altitude Trend Call-outs | Yes Heads Up Standard | Yes Heads Up Standard | Yes Heads Up Standard |
| Top & Bottom Antennas | Yes | Yes | Yes |
| Range | 7nm | 12nm | 21nm |
| Vertical Range | ±3,500 | ±3,500 | ±9,900 |
| Service Ceiling | 18,500 | 25,000 | 55,000 |
| Ground Mode | Yes | Yes | Yes |
| Weight on Wheels | Yes | Yes | Yes |
| Yoke Mount Mute | Yes | Yes | Yes |
| N-Number Intruder Display | Yes | Yes | Yes |
| Number of Targets Tracked | 50 | 50 | 50 |
| Number of Targets Displayed | 9 | 9 | 9 |
| System Weight | 9.29 lbs | 9.29 lbs | 9.29 lbs |
| Processor Dimensions | W 3.10" H 7.25" D 11.675" | W 3.10" H 7.25" D 11.675" | W 3.10" H 7.25" D 11.675" |

Choosing a Traffic System

| Feature | Skywatch 497 | TIS Garmin GTX330 | Honeywell KTA-870 |
|--|--------------------------------|--|-----------------------------|
| Suggested List Price | \$18,890 | \$4,995 | \$24,690 |
| Active Interrogation | Yes | No – Relies on Ground-based Radar | Yes |
| Audible Range, Bearing, Altitude, and Altitude Trend Call-outs | Yes Optional VIP | No | No |
| Top & Bottom Antennas | No | No | Yes |
| Range | 11nm | up to 55nm with adequate coverage | 40nm |
| Vertical Range | ±10,000 | ±3,500 | ±8,700 |
| Service Ceiling | 55,000 | line-of-site with in cover- age area | 55,000 |
| Ground Mode | Yes | No | Yes |
| Weight on Wheels | Yes | No | Yes |
| Yoke Mount Mute | No | No | No |
| N-Number Intruder Display | No | No | No |
| Number of Targets Tracked | 30 | 50 | 60 |
| Number of Targets Displayed | 8 | 50 | 60 |
| System Weight | 13.54 lbs | 4.20 lbs | 15.20 lbs |
| Processor Dimensions | W 12.52” H 3.56” D 7.76” | W 6.25” H 1.65” D 11.25” | W 4.5” H 7.0” D 13.8” |

EX500 vs. Bendix/King KMD850

MFD w/Datalink for Radar-Equipped Aircraft - Owners of radar-equipped aircraft get the tactical benefits of on-board weather radar while datalink provides the strategic element of weather avoidance. The EX500 supports 19 different radars, so in most cases you won't even need to replace your existing radar Antenna/RT, making the EX500 the easy choice. The Bendix/King KMD850 only works with their digital series (RDS8X/RDR 2X00) radars.

With MHAS package pricing, you can also add a dual-antenna TAS600 system, providing increased functionality at an even greater value.

EX500 advantages over KMD 850:

- EX500 can overlay radar AND datalink over map
- EX500 has higher display brightness and higher resolution
- EX500 zoom rate much more responsive
- No Audio option available with KMD850/KDR610
- EX500 allows for JeppView® (CMax) Approach Charts (KMD850 will not show Approach Charts)
- EX500 costs less, does more

EX500 wins on functionality and value.

EX500 vs. Bendix/King KMD850



EX500 vs KMD850

| | Avidyne List Price | MHAS Package Price | | List Price* (Difference) |
|---|--------------------------|---------------------------------|---|--------------------------------|
| EX500 MFD | | | Bendix/King KMD850 MFD | (\$3,585) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | NA | KMD850w/RDR2000 Radar Interface | \$13,440 |
| Traffic interface for TIS or TAS | Included | NA | Traffic Card for TIS or TAS | \$2,140 |
| EX500 Price | \$11,995 | | KMD850 MFD Price | \$15,580 |
| MHAS Package EX500 MFD w/Datalink | | MHAS Savings --> \$1,550 | B/K KMD850 MFD w/Datalink | (\$6,195) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | KMD850w/RDR2000 Radar Interface | \$15,580 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| MHAS System EX500 w/Datalink | \$17,490 | \$15,940 | KMD850 w/Datalink | \$22,135 |
| MHAS Package EX500 MFD w/TAS610 & Datalink | | MHAS Savings --> \$2,550 | B/K KMD850 MFD w/TAS & Datalink | (\$14,755) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | KMD850w/RDR2000 Radar Interface | \$15,580 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| TAS610 Active Traffic System | \$14,990 | \$13,990 | KTA670 Traffic Advisory System | \$22,550 |
| MHAS w/EX500 & Datalink & TAS | \$32,480 | \$29,930 | MFD w/TAS & Datalink Price | \$44,685 |
| MHAS Package EX500 MFD w/TAS620 & Datalink | | MHAS Savings --> \$3,550 | B/K KMD850 MFD w/TAS & Datalink | (\$9,755) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | KMD850w/RDR2000 Radar Interface | \$15,580 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| TAS620 Active Traffic System | \$20,990 | \$18,990 | KTA870 Traffic Advisory System | \$22,550 |
| MHAS w/EX500 & Datalink & TAS | \$38,480 | \$34,930 | MFD w/TAS & Datalink Price | \$44,685 |

* Prices as of September 2007 - Mfg Web Site

EX500 vs. Bendix/King KMD550

MFD w/Datalink for Non-Radar Aircraft - Non-radar aircraft gain huge benefits from having broadcast datalink graphical weather on board. It costs about the same as adding a Stormscope, but adds a tremendous amount of additional utility and value. The EX500 has a higher resolution display and a much easier user interface.

MHAS pricing makes the already low-priced dual-antenna TAS600 system even more affordable when bundled with the EX500 and the MLB700 broadcast datalink receiver.

EX500 advantages over KMD 550:

- EX500 has higher display brightness and higher resolution
- EX500 data blocks are fully configurable
- EX500 zoom rate much more responsive
- No Audio option available with KMD550/KDR610
- EX500 allows for JeppView (CMax) Approach Charts (KMD550 will not show Approach Charts)
- EX500 costs less, does more

EX500 vs. Bendix/King KMD550



EX500 vs KMD550

| | Avidyne List Price | MHAS Package Price | | List Price* (Difference) |
|---|--------------------------|---------------------------------|---|--------------------------------|
| EX500 MFD | | | Bendix/King KMD550 MFD | (\$1,135) |
| EX500 MFD (w/o Radar) | \$8,995 | NA | KMD550 MFD | \$7,990 |
| Traffic interface for TIS or TAS | Included | NA | Traffic Card for TIS or TAS | \$2,140 |
| EX500 Price | \$8,995 | | KMD550 MFD Price | \$10,130 |
| MHAS Package EX500 MFD w/Datalink | | MHAS Savings --> \$1,550 | B/K KMD550 MFD w/Datalink | (\$3,745) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | KMD550 MFD | \$10,130 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| MHAS System EX500 w/Datalink | \$14,490 | \$12,940 | KMD550 w/Datalink | \$16,685 |
| MHAS Package EX500 MFD w/TAS600 & Datalink | | MHAS Savings --> \$2,550 | B/K KMD550 MFD w/TAS & Datalink | (\$17,305) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | KMD550 MFD | \$10,130 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| TAS600 Active Traffic System | \$9,990 | \$8,990 | KTAB70 Traffic Advisory System | \$22,550 |
| MHAS w/EX500 & Datalink & TAS | \$24,480 | \$21,930 | MFD w/TAS & Datalink Price | \$39,235 |
| MHAS Package EX500 MFD w/TAS610 & Datalink | | MHAS Savings --> \$2,550 | B/K KMD550 MFD w/TAS & Datalink | (\$12,305) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | KMD550 MFD | \$10,130 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | KDR610 XM Datalink Receiver (Audio not available) | \$6,555 |
| TAS610 Active Traffic System | \$14,990 | \$13,990 | KTAB70 Traffic Advisory System | \$22,550 |
| MHAS w/EX500 & Datalink & TAS | \$29,480 | \$26,930 | MFD w/TAS & Datalink Price | \$39,235 |

* Prices as of September 2007 - Mfg Web Site

EX500 vs. Garmin GMX200 w/RDR2000 Radar Interface

MFD w/Datalink for Radar-Equipped Aircraft - As mentioned before, the EX500 supports 19 different radars, so in most cases, you won't even need to replace your existing radar Antenna/RT, making the EX500 the easy choice. The GMX200 only works with the B/K RDR 2000-series radars and the GWX56, and costs thousands more than the EX500. In fact, the radar-capable EX500 w/MLB700 saves you more than \$4,800 compared to the GMX200 w/GDL69A.

And Avidyne's MHAS pricing makes the already low-priced dual-antenna TAS600 system even more affordable when bundled with the EX500 and the MLB700 broadcast datalink receiver.

The EX500 is the hands-down winner on price and functionality here as well.

EX500 Advantages over the GMX200:

- EX500 can overlay on-board radar AND datalink on map
- EX500 fits more easily into tight panel spaces
- EX500 data blocks are fully configurable
- EX500 user interface for radar is much easier
- EX500 costs less, does more

EX500 vs. Garmin GMX200 w/RDR2000 Radar Interface



EX500 vs GMX200 (w Radar)

| | Avidyne List Price | MHAS Package Price | | List Price* (Difference) |
|---|--------------------------|---------------------------------|--|--------------------------------|
| EX500 MFD | | | Garmin GMX200 I/O MFD | (\$3,000) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | NA | GMX200w/RDR2000 Radar Interface | \$12,995 |
| Traffic interface for TIS or TAS | Included | NA | Traffic Interface for TIS or TAS | \$2,000 |
| EX500 Price | \$11,995 | | GMX200 MFD Price | \$14,995 |
| MHAS Package EX500 | | MHAS Savings --> \$1,550 | Garmin GMX200 MFD w/Datalink | (\$4,830) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | GMX200w/RDR2000 Radar Interface | \$14,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| MHAS System EX500 w/Datalink | \$17,490 | \$15,940 | GMX200 w/Datalink | \$20,770 |
| MHAS Package EX500 MFD w/TAS610 & Datalink | | MHAS Savings --> \$2,550 | Garmin GMX200 MFD w/TAS & Datalink | (\$9,730) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | GMX200w/RDR2000 Radar Interface | \$14,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS610 Active Traffic System | \$14,990 | \$13,990 | L-3 Skywatch 497 | \$18,890 |
| MHAS w/EX500 & Datalink & TAS | \$32,480 | \$29,930 | MFD w/TAS & Datalink Price | \$39,660 |
| MHAS Package EX500 MFD w/TAS620 & Datalink | | MHAS Savings --> \$3,550 | Garmin GMX200 MFD w/TAS & Datalink | (\$11,820) |
| EX500w/ RDR2000 Radar Interface | \$11,995 | \$10,995 | GMX200w/RDR2000 Radar Interface | \$14,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS620 Active Traffic System | \$20,990 | \$18,990 | L-3 Skywatch HP | \$25,980 |
| MHAS w/EX500 & Datalink & TAS | \$38,480 | \$34,930 | MFD w/TAS & Datalink Price | \$46,750 |

* Prices as of September 2007 - Mfr & Dealer Web Sites

EX500 vs. Garmin GMX200

Non-Radar Aircraft - Broadcast datalink graphical weather is even more valuable for pilots flying aircraft without an on-board radar sensor. A datalink receiver costs about the same as adding a Stormscope, but adds a tremendous amount of additional utility, increased situational awareness, and safety of flight. The EX500 w/MLB700 costs \$3,830 less than the GMX200 w/GDL69A.

In addition, Avidyne's MHAS pricing makes the already low-priced dual-antenna TAS600 systems even more affordable when bundled with the EX500 and the MLB700 broadcast datalink receiver.

EX500 Advantages over the GMX200:

- EX500 fits more easily into tight panel spaces
- EX500 data blocks are fully configurable
- EX500 costs less

EX500 vs. Garmin GMX200



EX500 vs GMX200 (Non-Radar)

| | Avidyne List Price | MHAS Package Price | | List Price* (Difference) |
|---|--------------------------|---------------------------------|--|--------------------------------|
| EX500 MFD | | | Garmin GMX200 MFD | (\$2,000) |
| EX500 MFD (w/o Radar) | \$8,995 | NA | GMX200 MFD | \$8,995 |
| Traffic interface for TIS or TAS | Included | NA | Traffic Card for TIS or TAS | \$2,000 |
| EX500 Price | \$8,995 | | GMX200 MFD Price | \$10,995 |
| MHAS Package EX500 MFD w/Datalink | | MHAS Savings --> \$1,550 | Garmin GMX200 MFD w/Datalink | (\$3,830) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | GMX200 MFD | \$10,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| MHAS System EX500 w/Datalink | \$14,490 | \$12,940 | GMX200 w/Datalink | \$16,770 |
| MHAS Package EX500 MFD w/TAS600 & Datalink | | MHAS Savings --> \$2,550 | Garmin GMX200 MFD w/TAS & Datalink | (\$13,730) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | GMX200 MFD | \$10,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS600 Active Traffic System | \$9,990 | \$8,990 | L-3 Skywatch 497 | \$18,890 |
| MHAS w/EX500 & Datalink & TAS | \$24,480 | \$21,930 | MFD w/TAS & Datalink Price | \$35,660 |
| MHAS Package EX500 MFD w/TAS610 & Datalink | | MHAS Savings --> \$2,550 | Garmin GMX200 MFD w/TAS & Datalink | (\$8,730) |
| EX500 MFD (w/o Radar) | \$8,995 | \$7,995 | GMX200 MFD | \$10,995 |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS610 Active Traffic System | \$14,990 | \$13,990 | L-3 Skywatch 497 | \$18,890 |
| MHAS w/EX500 & Datalink & TAS | \$29,480 | \$26,930 | MFD w/TAS & Datalink Price | \$35,660 |

* Prices as of September 2007 - Mfr & Dealer Web Sites

EX500 (w/GNS430W) vs. Garmin GNS530W

Customers trying to decide whether to get a Garmin 530W w/GDL69A or an EX500 should consider this: You are probably looking at the 530W because you want to add a more capable GPS with WAAS capability and perhaps you may be wanting to upgrade your NAV/COMM unit. In this case, we believe it makes more sense to choose the EX500 and couple it with a Garmin 430W. While comparably priced, you'll get the same WAAS-capable GPS/NAV/COMM as the 530W, but the EX500, provides a dramatically more-capable moving map than available with the 530W.

In addition, with the EX500 you can add CMax JeppView Electronic Charts, which the 530W cannot do. The EX500 also provides full color-contoured terrain base map and a full US obstacle database, which are not available on the 430W or 530W. And you get a much higher resolution display. **The EX500 has over twice as many pixels and 50% more screen area than the GNS530W, and you can overlay your flight plan, terrain, water, off-route nav aids, airways, AND weather without having to switch to different screens.**

Plus, if you have a radar indicator, the EX500 (with 19 different radar interfaces) will more than likely act as a replacement, whereas the 530W will not display on-board radar.

EX500 Advantages over the GNS530W:

- EX500 can overlay on-board radar AND datalink on moving map
- EX500 shows color-contoured terrain & obstacles, the 530W does not - (Terrain is a \$6,400 option on 530W)
- EX500 has higher display brightness
- EX500 has higher resolution display (The EX500 has over twice as many pixels and 50% more screen area)
- EX500 zoom rate much more responsive
- EX500 allows for JeppView (CMax) Approach Charts (GNS530W will not do Approach Charts)

EX500 (w/GNS430W) vs. Garmin GNS530W



EX500 w430W vs GNS530W

| | Avidyne List Price | MHAS Package Price | | List Price* (Difference) |
|---|--------------------|--------------------|--|--------------------------|
| EX500 MFD (wGNX430) | | | Garmin GNS 530W | \$3,250 |
| EX500 MFD w/o Radar | \$8,995 | NA | GNS530W GPS/NAV/COM w/WAAS | \$16,495 |
| GNS430W GPS/NAV/COMM w/WAAS | \$10,750 | NA | --- | |
| EX500 Price | \$19,745 | | GNS 530W Price | \$16,495 |
| MHAS Package EX500 MFD w/Datalink | MHAS Savings --> | \$1,550 | Garmin GNS 530W w/Datalink | \$1,420 |
| EX500 MFD w/o Radar | \$8,995 | \$7,995 | Garmin GNS 530W | \$16,495 |
| GNS430W GPS/NAV/COMM w/WAAS | \$10,750 | \$10,750 | Limited MFD functionality Low-resolution display | |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| MHAS System EX500 w/Datalink + 430 | \$25,240 | \$23,690 | GNS 530W w/Datalink | \$22,270 |
| MHAS Package EX500 MFD w/TAS600 & Datalink | MHAS Savings --> | \$2,550 | Garmin GNS 530W w/TAS & Datalink | (\$8,480) |
| EX500 MFD w/o Radar | \$8,995 | \$7,995 | Garmin GNS 530W | \$16,495 |
| GNS430W GPS/NAV/COMM w/WAAS | \$10,750 | \$10,750 | Limited MFD functionality Low-resolution display | |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS600 Active Traffic System | \$9,990 | \$8,990 | L-3 Skywatch 497 | \$18,890 |
| MHAS w/EX500 & Datalink & TAS | \$35,230 | \$32,680 | MFD w/TAS & Datalink Price | \$41,160 |
| MHAS Package EX500 MFD w/TAS610 & Datalink | MHAS Savings --> | \$2,550 | Garmin GNS 530W w/TAS & Datalink | (\$3,480) |
| EX500 MFD w/o Radar | \$8,995 | \$7,995 | Garmin GNS 530W | \$16,495 |
| GNS430W GPS/NAV/COMM w/WAAS | \$10,750 | \$10,750 | Limited MFD functionality Low-resolution display | |
| MLB700 Broadcast Datalink Rcvr w/Audio & RC70 Remote | \$5,495 | \$4,945 | GDL69A XM Datalink Receiver w/Audio (Add \$590 for GRC10 Remote) | \$5,775 |
| TAS610 Active Traffic System | \$14,990 | \$13,990 | L-3 Skywatch 497 | \$18,890 |
| MHAS w/EX500 & Datalink & TAS | \$40,230 | \$37,680 | MFD w/TAS & Datalink Price | \$41,160 |

* Prices as of September 2007 - Mfg & Dealer Web Sites

Comparison Chart

| | Avidyne EX500 | Bendix/King KMD 550/850 | Garmin GNS530W | Garmin GMX200 |
|--|-------------------------------------|------------------------------|-------------------------------|---------------------------|
| Datalink Service | WSI InFlight MLB700 | Baron Wx KDR610 | Baron Wx GDL69/A | Baron Wx GDL69/A |
| Non-Radar MFD and Traffic interface | \$8,995 | \$10,130 | \$16,496 | \$10,995 |
| Non-Radar MFD w/Datalink & Traffic interface | \$12,940 | \$16,685 | \$22,270 | \$16,770 |
| MFD System Price w/RDR2000 Radar, Datalink & TAS interface | \$15,940 | \$22,135 | Radar Interface Not Available | \$20,770 |
| All-altitude coverage and full CONUS coverage | Yes | Yes | Yes | Yes |
| Display Resolution | High | Low | Low | High |
| Display Brightness | High | Med | Med | High |
| Graphical METARs | Yes | Yes | Yes | Yes |
| Plain English METARs | Yes | No | No | No |
| Full Overlay | Yes | No | No | No |
| TFR Updates | Yes | Yes | Yes | Yes |
| Dedicated Radar Range, Tilt & Bearing Knobs | Yes | Yes | N/A | No |
| XYZ Heading input | Yes | Requires \$2K interface card | Requires \$3500 GAD 42 | No |
| TAWS support | Yes \$2K Option + Sensor | Yes \$2K Option + Sensor | Yes \$6.4K Upgrade | Yes \$2K Option + Sensor |
| JeppView Approach Chart Support | Yes (CMax) | No | No | Yes (ChartView) |
| Support for RDR130/150/160 Radar | Yes | No | No | No |
| Support for Collins WXR250/270 and Bendix 1100/1200/1300 | Yes | No | No | No |
| Datalink Subscription Fees | \$29 or \$39/Month for WSI InFlight | \$29 or \$49/Month for XM | \$29 or \$49/Month for XM | \$29 or \$49/Month for XM |
| Comparison based on available website data as of Sept 2007 and is subject to change. | | | | |

Datalink Services Available on FlightMax EX500/EX5000

Avidyne's Weather Data Subscription Services (using WSI InFlight Data)

| | Avidyne Performance | Avidyne Essentials |
|---------------------|---------------------|--------------------|
| | \$39 | \$29 |
| NOWRad | X | X |
| Graphical METARs | X | X |
| Textual METARs | X | X |
| TAFs | X | X |
| TFRs | X | X |
| Lightning | X | X |
| Storm Track Vectors | X | |
| Cloud Tops | X | |
| Cell Movement | X | |
| Winds Aloft | X | |
| Temps Aloft | X | |
| Graphical AIRMETs | X | |
| Graphical SIGMETs | X | |

SIRIUS Audio subscription is \$12.95 through SIRIUS Satellite Radio.

Can I afford MHAS on my airplane?

The question is: “Can you afford not to have MHAS on your airplane?”

Considering the utility, safety and economic implications of real time weather and TAS on a full-function MFD, you should **expect** MHAS as standard equipment in your avionics.

With the EX500/EX5000 MFDs, the complete weather picture is displayed as an overlay on the map, with your flight plan, traffic, terrain, obstacles, and TFRs making it possible to avoid the weather with complete situational awareness anywhere in the continental United States. Our high-performance processing and integrated graphics architecture allow simultaneous real-time display of all the situational data available.

With Avidyne’s MHAS6000 Multi-Hazard Avoidance System, you can have the most advanced safety suite available, at the greatest value.



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