KGP 560 GA-EGPWS

Bendix/King Enhanced Ground Proximity Warning System (TAWS) for General Aviation





Using a weather radar indicator, dedicated display or multifunction display (MFD), such as the KMD 850 shown above, the KGP 560 gives you a clear, real-time view of the terrain below—and ahead of—your aircraft.

Enhanced Terrain Safety

In a flight environment that demands an ever-increasing amount of attention, pilots have to develop a higher level of situational awareness. That's why we've introduced the Bendix/King KGP 560 Enhanced Ground Proximity Warning System (EGPWS) for General Aviation, a system that incorporates GPS position and a terrain/obstacle database to give you a clear picture of the terrain ahead of and below your aircraft, anywhere in the world. Offering a unique combination of look-ahead algorithms, comprehensive terrain and obstacle database, and multi-level alerting capability, our GA-EGPWS provides enhanced situational awareness and the most advanced protection available against CFIT—Controlled Flight Into Terrain.

In fact, the KGP 560 GA-EGPWS actually exceeds the FAA's specification for CFIT protection devices. This specification, which defines a Terrain Awareness Warning System (TAWS), outlines the basic requirements for a terrain/airport database, look-ahead algorithms, and a terrain clearance floor feature. To this list of capabilities, the KGP 560 also adds a host of other safety features, including terrain display, peaks mode, geometric altitude, and even a built-in GPS receiver.

But the primary reason to choose our KGP 560 EGPWS for GA isn't only its impressive list of features. It's because it does the best job at protecting you from the number one hazard in General Aviation.

The Hazard Of CFIT

How big a problem is controlled flight into terrain (CFIT), the problem that can happen only to 'the other guy'?

According to the National Transportation Safety Board, nearly 30% of all U.S. general aviation accidents occurring over the past ten years—and 60% of all fatalities in public air transportation—were the result of controlled flight into terrain.

Enhanced CFIT Protection

- Compact, affordable terrain and obstacle protection now available for general aviation
- Helps eliminate the cause of more than 30% of recent general aviation accidents
- Look-ahead algorithms and terrain/obstacle database for better situational awareness
- Based on proven air transport EGPWS technology

That's why the FAA requires all large (Part 121 & 135) turboprops and jets flying in the U.S. to be equipped with a Ground Proximity Warning System (GPWS). And due to the high rate of CFIT accidents —25 reported in general aviation during just the first quarter of 1999, the FAA has recently called for all new turbine aircraft with six or more passenger seats in Part 91 (non-revenue) operations to be equipped with a terrain warning system by March, 2002.



Amazingly compact and affordable, the KGP 560 GA-EGPWS exceeds the FAA specification for TAWS.

Added Value

In addition to meeting (and, in many cases, exceeding) the TSO-specified operating parameters, the KGP 560 offers useful capabilities not found on other systems.

For example, the KGP 560 features our new 'Peaks' mode which provides additional information about the terrain below your aircraft in a digital format. It also shows this information pictorially, by varying the color and intensity of the screen display according to the elevations of the highest and lowest displayed terrain.

Another Honeywell exclusive is our Geometric Altitude computation. Based on GPS altitude, this function is designed to cross-reference your altimeter reading and eliminate altitude errors resulting from temperature extremes, nonstandard pressure conditions and altimeter mis-sets— the latter accounting for 25% of all CFIT accidents. If the KGP 560 detects a discrepancy in altitude, a "check altitude" alert is issued. during landings and operations near airports, the KGP 560 incorporates a feature called Runway Field Clearance Floor (RFCF). Providing 360-degree coverage of terrain and obstacles within 5 nm of public runways of more than 2,000 feet, RFCF also helps protect against premature descent during landing as it eliminates nuisance alerts.

To offer further protection against premature descent

Other key benefits found only in the KGP 560 include our sophisticated look-ahead algorithms, derived from our extensive air transport experience; and a built-in GPS receiver, which eliminates the need for an external GPS source.

In short, by choosing the KGP 560, you get a lot more for your money.

Runway Field Clearance Floor

The KGP 560's Runway Field Clearance Floor feature establishes three-dimensional zones of clearance within 5 nm of all public runways over 2,000 feet in length. Helping avoid premature descent during landing, this feature provides protection from terrain and obstacles around airports, while reducing nuisance warnings.



Terrain Color Gradient



Depending on your aircraft's altitude and your proximity to terrain, the KGP 560 provides a six-color, graphical display of surrounding terrain on your weather radar indicator, MFD or dedicated display. This Terrain Alerting and Display (TAD) feature provides you with strategic terrain information at ranges of up to 320 nm, well before a potential conflict.

Compact Protection

A compact, single-box system, the KGP 560 weighs less than 1.5 lbs., including its built-in GPS receiver. Requiring minimal input—just pressure altitude and power—the KGP 560 is easy to install. Offering coverage for anywhere you fly, the KGP 560's regional data cards can be replaced in the field, simplifying maintenance.

In short, with its unprecedented combination of advanced capability, database accuracy, simplicity, practicality, compact size and light weight, the KGP 560 provides the situational awareness and protection you need in an affordable package.

Advanced Capabilities

- Exceeds TSO C151a Class B
- Terrain display option
- Exclusive 'Peaks' mode displays terrain below the aircraft
- Exclusive Geometric Altitude computation identifies altimeter errors and issues a "check altitude" alert
- Advanced Runway Field Clearance Floor (RFCF) feature provides 360-degree protection against premature descent during landings and near-airport operations
- Proprietary Honeywell database is the most comprehensive and accurate available

The Honeywell Database Advantage

While our advanced look-ahead algorithms offer unmatched protection, the KGP 560 also benefits from the sophistication and high degree of capability that comes with Honeywell's worldwide proprietary Terrain, Obstacle and Airport Database.

We've spent more than 10 years of dedicated engineering effort in the development and validation of our database, making it the most comprehensive terrain protection database in the industry. This effort is further augmented by our strict configuration management and Accuracy Validation Procedures, which ensure the accuracy and reliability of our information. Thus, the KGP 560 derives a full measure of benefit from our tremendous air transport operational experience, both in terms of the completeness and the accuracy of its database.

In addition, our Accuracy Validation process actually allows Honeywell engineers to fly a "virtual" aircraft into any airport in the world, confirming specific details and analyzing system performance in terms of both terrain accuracy and variation in aircraft position. Incorporating WGS-84 information, the global standard for latitude and longitude reference, the KGP 560's database provides a resolution unmatched by any other system.

This is the level of refinement and capability you find with our GA-EGPWS database, making the KGP 560 the most accurate and dependable general aviation terrain warning system you can buy.



Based on our beritage of safety—with more than 25 years and 25 million flight hours of experience — the new KGP 560 GA-EGPWS offers protection throughout all phases of flight for general aviation aircraft, in a compact, affordable package. Shown here with other members of the EGPWS 'family' the KGP 560 (fr.) is complemented by MkV, Mk VI, Mk VII and MkVIII EGPWS units, designed for corporate and air transport aircraft.

The Standard In Terrain Avoidance

Incorporating much of the technology found in Honeywell's EGPWS for air transport aircraft, the KGP 560 GA-EGPWS was developed specifically to protect light turbine and piston aircraft.

It does this by combining an early alert/ warning capability with an optional terrain display, to enhance safety as it improves situational awareness. Moreover, by using derivatives of the algorithms currently in service with the air transport fleet, the KGP 560 virtually eliminates nuisance warnings. Terrain information can be presented on a weather radar indicator, dedicated display or multifunction display, such as our KMD 550 or KMD 850 color MFD.

Compliant with TSO C151a Class B, the KGP 560 supports a range of functions, including:

- Alerting for premature descent
- Alerting for negative climb or descent after takeoff, or excessive rate of descent
- 500-ft. altitude callout and alerting within 5 nm of public runways greater than 2,000 feet in length
- Look-ahead algorithms

KGP 560 Features and Benefits

- Terrain display and alerting functions optimized for General Aviation
- Affordable CFIT protection in a compact, one-box package
- Performance and reliability based on more than 25 years of GPWS experience
- Exceeds TSO C151a Class B
- Easy to install
- Requires minimal sensor inputs
- Updateable worldwide database coverage (by region) including terrain, obstacles, & airports/runways
- Based on proven air transport technology
- Up to 320-nm range display capability
- Built-in internal GPS receiver (also interfaces with such compatible GPS units as the Bendix/King KLN 94 and KLN 900)
- Available with 6-color Terrain Alerting and Display output
- Interfaces with IHAS 8000 and IHAS 5000 Integrated Hazard Avoidance Systems

A Word About Support

Like our other avionics, the new KGP 560 is backed by our comprehensive Bendix/King two-year "no hassle" warranty. And wherever you fly, you'll never be far from one of our 800 authorized service centers worldwide—the most extensive and capable network in general aviation.

Compatible Terrain Displays

Manufacturer
Bendix/King
Bendix/King
Bendix/King
Grimes

Model Number IN-182A

IN-862A KMD-550/850

TRA-45A

Note: External switching may be required on some displays.

KGP 560 Specifications

Physical Dimensions: Weight:	2.20 in. W x 4.15 in. H x 6.25 in. L 1.5 lbs.
Power Requirement:	10-32VDC
TSO:	C151a Class B
Inputs:	Pressure Altitude
	Power
	Outside Air Temperature (optional)
Outputs:	Display
	Annunciators
	Aural Warnings
Temp Range:	-20°c to 55°c



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DISCLAIMER: Avionics installations require special skills, tools and test equipment. Our limited warranty is valid only for equipment installed in accordance with our sales and service policies. In keeping with our policy of continual product improvement, designs and specifications described here may be altered without notice.





Presenting terrain, traffic, weather and position information on a single, easy-toread screen, the IHAS 8000 and IHAS 5000 are simply the most comprehensive safety and situational awareness systems ever offered in General Aviation.

The IHAS Connection

As revolutionary as it is by itself, the KGP 560 offers even greater capability as an element in one of our Integrated Hazard Avoidance Systems (IHAS).

Available as part of the IHAS 8000 (for radar-equipped aircraft) and IHAS 5000 (for non-radar equipped aircraft), the KGP 560 provides the terrain information as these systems integrate the four major airborne safety systems—position, weather avoidance, traffic advisories and terrain warning—on one easy-to-read multifunction display.

Honeywell

23500 W. 105th Street, Olathe, KS 66061 Telephone 913.712.2613 Fax 913.712.5697 Toll-Free in U.S. 877.712.2386 www.bendixking.com

