

# Honeywell Mark XXI & Mark XXII EGPWS



ENHANCED GROUND PROXIMITY  
WARNING SYSTEMS

**Advanced protection for helicopters**

**Honeywell**

# Designed specifically for helicopters

Ensure safe flight and protection from Controlled Flight Into Terrain (CFIT) collisions with Honeywell's Mark XXI and XXII Enhanced Ground Proximity Warning Systems (EGPWS). Specifically configured for the dynamic factors of rotary-wing performance, this advanced Terrain Awareness and Warning System (TAWS) helps prevent avoidable collisions with the ground, water, and obstacles such as towers—even when flying in changing weather with poor visibility, rough terrain, or at low altitudes. More than a decade in development by a leader in aviation-safety systems, the Mark XXI and XXII delivers proven and potentially life-saving performance.

## Enhanced situational awareness

In ever-changing conditions, marginal weather combined with an unforeseen hazard can conspire against even the best pilot. Honeywell's warning systems minimize risks and maximize reaction time by constantly and unobtrusively monitoring terrain and obstacles in proximity of the helicopter. Crews see an intuitive view of nearby terrain that greatly enhances their situational awareness and hear alerts only when there is a very real danger.

## Superbly accurate

Honeywell applied 30 years of expertise as the worldwide leader in ground proximity warning and aviation safety to develop a custom system that would fit the unique flight operations of helicopters. Helicopter-specific alerting algorithms and a rich, high-resolution (6 arc-second) database of terrain and obstacles allow the Mark XXI and XXII EGPWS to deliver accuracy at any altitude. So pilots always have precision-tuned guidance that enhances their situational awareness and reduces the risk of CFIT incidents—with virtually no false warnings.

## Overall protection, day or night

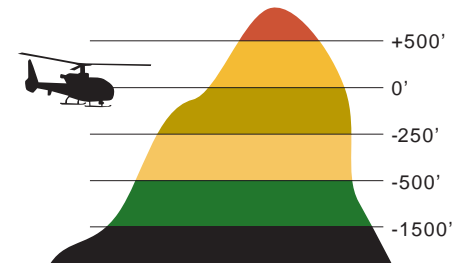
Research shows that helicopter CFITs occur more often in daytime visual flight rules (VFR) cruise conditions than under all other conditions combined. EGPWS was designed with this in mind. So it's always on guard, in the best or worst conditions, day or night, never fatigued or distracted, dynamically monitoring the aircraft's actual proximity to potential terrain and obstacle threats and alerting pilots to any hazards that lie just out of view by way of a visual display and verbal alerts.

## Two solutions to fit your needs

Honeywell offers two systems to best fit your operating environment. The Mark XXI is a highly affordable, easy-to-install way to add the powerful safety benefits of EGPWS to VFR-equipped helicopters without a radio altimeter (Class B TAWS). The Mark XXII is a full-featured system with additional highly advanced functions for IFR-equipped helicopters with a radio altimeter (Class A TAWS). With either system, you'll fly with confidence with advanced protection against CFIT collisions.



The Honeywell terrain display delivers enhanced situational awareness, for real protection and peace of mind.











Day or night you'll have a clear view of nearby terrain, water, and obstacles with one quick look at the intuitive color bands on your display.







## Enhanced Features

	Mark XXI	Mark XXII
Proprietary Honeywell Database		
Worldwide Terrain Database (11 Regions)		
Airports		
Heliports		
Obstacles		
Oil Rigs		
Look-ahead Algorithms		
Alerting based on projected path (turn extrapolation) and climb performance		
Internal GPS Card		
Geometric Altitude		
Display Interfaces		
Single		
Dual		
EFIS		
Wx Radar Indicator, MFD, Standalone		
Terrain display		
Auto Display Pop-up		
Auto Range		
Enroute Terrain Display (Peaks)		
Vertical Situation Display (VSD)		
EGPWS Suppress Options		
Low Altitude Mode		
Audio Inhibit (5 minutes)		
Terrain Inhibit		

## Classic Features

	Mark XXI	Mark XXII
Excessive Descent Rate (Mode 1)		
Excessive Closure Rate/Rising Terrain (Mode 2)		
Descent After Takeoff (Mode 3)		
Insufficient Terrain Clearance (Mode 4)		
Descent Below Glideslope (Mode 5)		
Altitude Callouts (Mode 6):	Subscription	Free for life
Excessive Bank Angle		
Tail Strike Protection		
Autorotation		

## Additional Features

	Mark XXI	Mark XXII
Airspeed Expansion		
Envelope Modulation		
Tower Guy Wires		
Built-in Test		



Flying low-level in VFR conditions? Simply engage one of the system's available suppress features, such as Low Altitude Mode, to curtail warnings while retaining a view of surrounding terrain and obstacles on the display.



## Proven. Safer. Better.

Fly with confidence, knowing you've partnered with a worldwide flight-safety leader. Honeywell delivers value, performance, unmatched industry experience, and superior customer service you can depend on.

## Worldwide support.

With the most extensive and capable sales offices, field service engineers, distribution centers, repair and overhaul centers, and more than 800 installation service centers positioned around the globe—from the Americas to Europe, across the Middle East and Africa, and throughout the Asia-Pacific region—Honeywell is the worldwide force that keeps your fleet in the air 24/7/365.

## The Honeywell advantage.

As part of a \$30 billion multinational high-technology products and services company, Honeywell Aerospace draws upon a depth of knowledge, experience, and resources unmatched in the industry. We are a global leader in integrated avionics, engines, systems, and service solutions for aircraft manufacturers, airlines, business and general aviation, military, helicopters, space, and airport operations.

**Count on EGPWS.**  
**Count on Honeywell.**

## Find out more

To learn more about the EGPWS family of products, visit us online at [www.honeywell.com/egpws](http://www.honeywell.com/egpws)

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## Specifications

	Mark XXI EGPWS	Mark XXII EGPWS
MTBF (helicopter derated)	7,000 operating hours	5,500 operating hours
Packaging	Non-ARINC	Non-ARINC
Power	8 watts normal operation	15 watts normal operation
Voltage	10–32 VDC	28 VDC
Mechanical (dimensions H x W x L)	3.95 x 2.20 x 6.25 inches	6.2 x 3.0 x 12.1 inches
Weight	1.5 pounds	3.9 pounds
Cooling	ARINC 600-6, forced-air cooling not required	ARINC 600-6, forced-air cooling not required
Environmental	Meets RTCA DO-160D	Meets RTCA DO-160D
Warranty	2 years	3 years
TAWS certification	Designed and certified to TSO-C151b. Class B, GPWS, and terrain awareness and display functions are tailored to unique helicopter flight operations.	Designed and certified to TSO-C151b. Class A, GPWS, and terrain awareness and display functions are tailored to unique helicopter flight operations.

