

Honeywell

MARK XXI & MARK XXII HELICOPTER EGPWS – HTAWS

Helicopter Enhanced Ground Proximity Warning System.
The first HTAWS to receive TSO-C194 approval.
The most advanced terrain/obstacle awareness
for helicopter operations.



The Proven and Trusted Terrain Awareness for Helicopters

Honeywell's Mark XXI & XXII systems are the first HTAWS to receive TSO-C194 approval. They set the standard as the CFIT protection solution for oil/gas and VIP transport and utility operators.

The Honeywell solution: Helicopter Enhanced Ground Proximity Warning System

The TSO-C194-approved Mark XXI and XXII Helicopter Enhanced Ground Proximity Warning Systems (EGPWS) helps HEMS pilots 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. It's always on guard, in the best or worst conditions, day or night, dynamically monitoring the aircraft's actual proximity to potential terrain and obstacle threats just out of view with a visual display and audio/visual alerts.

Engineered specifically for rotary wing flight operations

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 are alerted only when there is a very real danger.

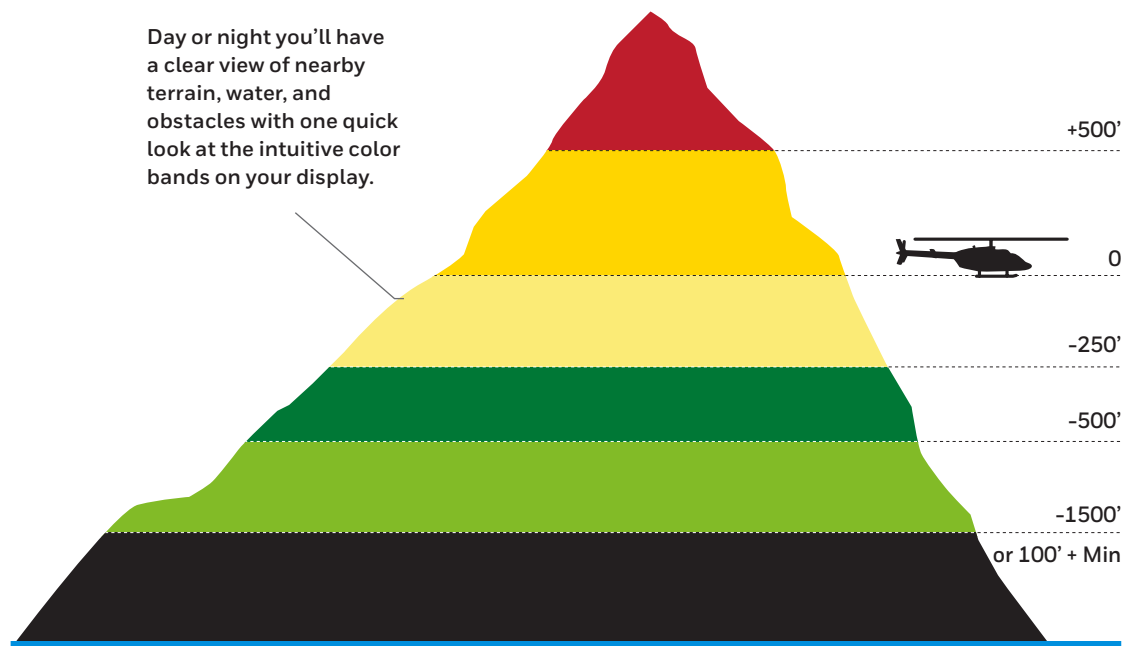
The Honeywell HTAWS Difference:

- Designed for helicopters
- Exceeds the FAA definition for HTAWS
- Internal GPS card – reduces cost
- Compatible with 3rd party displays
- Light weight with flexible installation – can be positioned anywhere in the helicopter
- High resolution terrain imagery
- Experience you can trust



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.

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.





EGPWS delivers high performance precision, reliability, and value in helicopter flight safety for IFR or VFR helicopters

- Mark XXI EGPWS ideal for VFR-equipped helicopters without a radio altimeter
- Mark XXII EGPWS ideal for IFR-equipped helicopters with a radio altimeter.

Superbly accurate

The Mark XXI / XXII's helicopter-specific alerting algorithms and a high resolution database of terrain and obstacles deliver accuracy at any altitude. So pilots always have precision-tuned guidance that enhances their situational awareness and reduces the risk of CFIT incidents and minimizes false alarms.

Honeywell's warning systems minimize risks and maximize reaction time by constantly and unobtrusively monitoring terrain and obstacles in proximity of the helicopter.



The Mark XXI and Mark XXII have the most comprehensive set of aviation obstacle data available, including towers and antennas.

Honeywell's HTAWS delivers unparalleled situational awareness for real protection in VFR and IFR flight environments.

Benefits for Helicopter Pilots and Operators:

- Proven HTAWS solutions with more than 1 million helicopter flight hours since 2001
- Tailored performance for HEMS mission aircraft
- High performance for both IFR and VFR helicopter
- Helps reduce pilot workload and stress levels
- Advanced database allows for precise display and alerting:
 - Database covers 100 percent of the world's terrain
 - An ever-expanding database currently includes more than 120,000 man-made obstacles
 - Regular database updates provide the most up-to-date terrain, airport and obstacle information
- Honeywell has more than 30 years of EGPWS development experience
- Leading provider of safety warning systems to reduce CFIT risk
- Proven effectiveness in improving flight safety
- Worldwide support

Proven. Safer. Better

Fly with confidence, knowing you've partnered with the very best. As the worldwide flight-safety leader, Honeywell delivers the demonstrated value and performance, unmatched 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, cross 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

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.

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	✓	✓
DISPLAY INTERFACES		
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)		✓
ALTITUDES CALLOUTS (MODE 6)		
EXCESSIVE BANK ANGLE		✓
TAIL STRIKE PROTECTION		✓
AUTOMATION		✓

ADDITIONAL FEATURES	MARK XXI	MARK XXII
A IRSPEED EXPANSION		✓
ENVELOPE MODULATION		✓
TOWER GUY WIRES	✓	✓
BUILT-IN TEST	✓	✓

Find Out More

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