

SKYWATCH[®]

Collision Avoidance Systems



Safety in Numbers

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For over 10 years, pilots have trusted SkyWatch Collision Avoidance Systems to help them fly safely. SkyWatch was the first Active Collision Avoidance System certified for general aviation. More than 9,000 systems are installed in aircraft ranging from single engine trainers to helicopters to military transport aircraft. SkyWatch is so trusted it is the preferred choice of top aircraft manufacturers worldwide. Add to that a 5-Year Warranty and numerous display options and it's easy to see why SkyWatch is the world's most trusted name in collision avoidance safety. Learn more at www.FlySkyWatch.com or call 800-253-9525 (US) or 616-949-6600 (International).



Every SkyWatch system is backed by a 5-Year "No Hassle" Warranty. Should the unit ever fail during that period, L-3 Avionics Systems will repair the unit or provide an exchange replacement unit free of charge. This includes shipping within 1-2 business days to minimize aircraft downtime and to keep you flying safely.

SKYWATCH® 497

The affordable original.

SKYWATCH®
COLLISION AVOIDANCE



FEATURES & BENEFITS:

- > Verbal Intruder Positioning (VIP) announces range, bearing and relative altitude of intruder aircraft through cockpit's audio system
 - > Active surveillance system that operates independently of radar coverage
 - > Tracks up to 30 intruder aircraft simultaneously and displays 10 or more of the most threatening*
 - > Pilot selectable VIP or traditional TCAS audible callouts via optional on/off switch
 - > Displays traffic out to 11 nmi*
 - > Provides both aural and visual warnings
 - > "Look Up/Look Down" altitude display modes highlight specific layers of relative altitude range — useful during climbs, descents and takeoff
 - > Optional bottom mount antenna installation, useful for helicopter applications
- * Depending on display capability

"Traffic, Traffic - 12 O'Clock High - 3 Miles"

Designed to be powerful yet easy on the budget, SkyWatch is the ideal traffic advisory system for general aviation, fixed-wing and helicopter applications. SkyWatch monitors the airspace around an aircraft and indicates where to look for nearby transponder-equipped aircraft that may pose a collision threat — providing the "big picture" in traffic awareness at a fraction of the cost of TCAS.

After receiving replies to its Mode C type interrogations, the SkyWatch system computes the responding aircraft's range, bearing, relative altitude and closure rate — predicting potential traffic conflicts within an eleven mile range. Aural traffic alerts

are annunciated through the aircraft's existing audio system, and visual targets are displayed using TCAS-like symbols.

The SkyWatch system consists of a Transmitter/Receiver Computer and a single low-profile Directional Antenna. Pilots can choose between a dedicated monochrome CRT, MFD or weather radar display (via the RGC-350) to control and monitor the SkyWatch system. Information may also be overlaid on the display's moving map page. Additionally, SkyWatch boasts the flexibility to drive up to three separate displays simultaneously, and in different configurations.

TCAS I performance without the price.



FEATURES & BENEFITS:

- > Verbal Intruder Positioning (VIP) announces range, bearing and relative altitude of intruder aircraft through cockpit's audio system
- > Active surveillance range out to 35 nmi* that operates independently of radar coverage
- > Displays traffic onto CRT, MFD, EFIS, IVSI or radar indicator
- > Tracks up to 35 intruder aircraft simultaneously and displays eight or more of the most threatening**
- > Can be installed as a TAS or TCAS I**
- > ADS-B ready in anticipation of the Free Flight air traffic management environment of tomorrow
- > Interfaces with Stormscope® WX-1000 CRT display (as a TAS only)

* Certain limitations may apply. See Pilots Guide for performance specifications.

** Depending on display capability

“Traffic, Traffic - 12 O’Clock High - 3 Miles”

For superior collision avoidance technology, look to the traffic advisory system that’s as affordable as it is powerful — SkyWatch HP. Practical, cost-effective and rooted in proven technology, it provides all the features of SkyWatch, and then some.

With a 35-mile surveillance and display range (depending on the selected display interface), SkyWatch HP’s increased power adds an effective closure rate of 1,200 knots, allowing aircraft at speeds of up to 600 knots each to accurately track each other from a greater distance. SkyWatch HP also offers enhanced display options such as an ARINC 429 EFIS output, and the ability to display traffic onto a variety of Multi-Function Displays (MFDs) as well as weather radar indicators. Additionally, the flexible SkyWatch HP

system can be installed as either a TAS or TCAS I using a conforming display and antenna.

Fast and reliable, SkyWatch HP tracks up to 35 targets simultaneously, displaying eight or more of the most threatening. Like its predecessor, SkyWatch, the HP version relies on Mode C signals to interrogate transponders of surrounding aircraft. Once SkyWatch HP has identified an intruder, the system uses the conflicting aircraft’s measured distance and closure rate to issue visual and audible warnings to the pilot. Allowing up to 30 seconds warning time for the initiation of avoidance procedures, SkyWatch HP offers turboprop, helicopter and light jet owners and operators increased performance for their high-powered aircraft. For higher performance you can count on, look to SkyWatch HP.

SkyWatch and SkyWatch HP will issue a Traffic Advisory...							
	If Your Aircraft	And Your Aircraft's Altitude Is	And Your Landing Gear Is	And Your Ground Speed Is	And An Intruder Aircraft Is Detected		
1	has a radio altimeter*	below 2,000 ft AGL			within a 0.2 nmi horizontal radius and a ±600 ft relative altitude		
2					within 15-20 sec of CPA**		
3		above 2,000 ft AGL			within a 0.55 nmi horizontal radius and a ±800 ft relative altitude		
4					within 20-30 sec of CPA**		
5	does not have a radio altimeter*		down		within a 0.2 nmi horizontal radius and a ±600 ft relative altitude		
6					within 15-20 sec of CPA**		
7			up		within a 0.55 nmi horizontal radius and a ±800 ft relative altitude		
8					within 20-30 sec of CPA**		
9			fixed		not available***	within a 0.55 nmi horizontal radius and a ±800 ft relative altitude	
10							within 20-30 sec of CPA**
11						available and greater than or equal to 120 knots	within a 0.55 nmi horizontal radius and a ±800 ft relative altitude
12							within 20-30 sec of CPA**
13		available and less than 120 knots		within a 0.2 nmi horizontal radius and a ±600 ft relative altitude			
14				within 15-20 sec of CPA**			

☐ Sensitivity Level A ☐ Sensitivity Level B

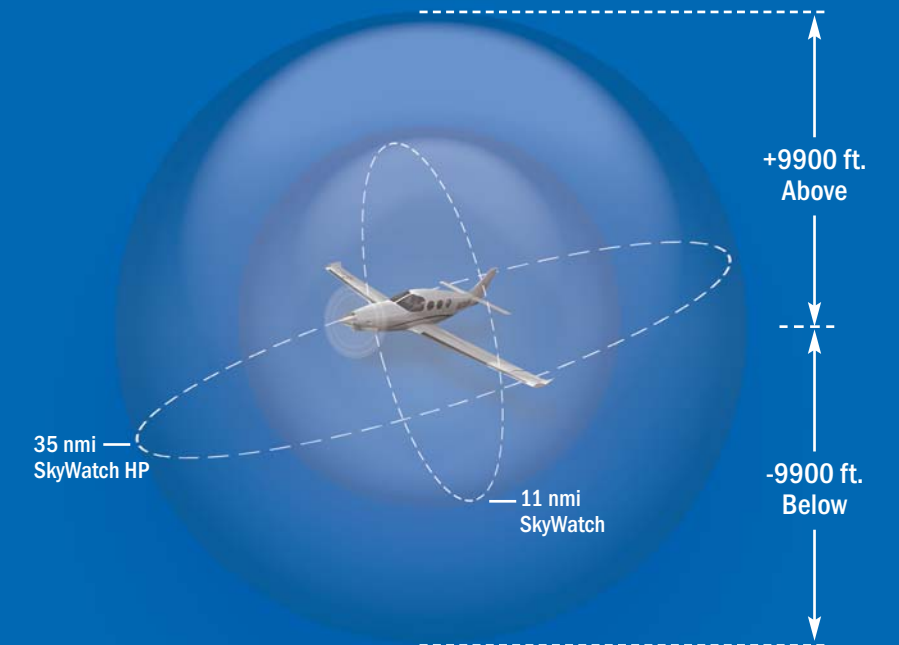
* Must have a compatible ARINC 429 radio altimeter wired to the SkyWatch system and providing valid altitude information. A compatible analog altimeter is also acceptable for SkyWatch HP systems.

** CPA means Closer Point of Approach.

*** Ground speed is not available whenever your GPS navigation information is not available.

Surveillance Zones for SkyWatch and SkyWatch HP

The SkyWatch System provides a 360° spherical envelope of monitored airspace around your aircraft. After receiving replies to its Mode C type interrogations, the SkyWatch system computes the responding aircraft’s range, bearing, relative altitude and closure rate, allowing up to 30 seconds warning time for the initiation of avoidance procedures.



THE KEY TO ENHANCED AWARENESS

SkyWatch and SkyWatch HP Display Symbols

Vertical Trend Arrow

- ↑ Symbol represents traffic that is ascending or descending at a rate greater than 500 fpm.
- ↓

Traffic Advisory (TA)

- 01** Combination of an on-screen symbol and aural warning. As pictured, the audible warning would be "Traffic, Traffic, 4 O'Clock Low, 2 Miles" through the cockpit audio system.

Traffic Data Tag

- ◇ The relative altitude of the intruder aircraft shown in hundreds of feet. Positive sign indicates traffic above your aircraft, negative sign indicates traffic below.
- 18**

Display Range Indicator

For SkyWatch:

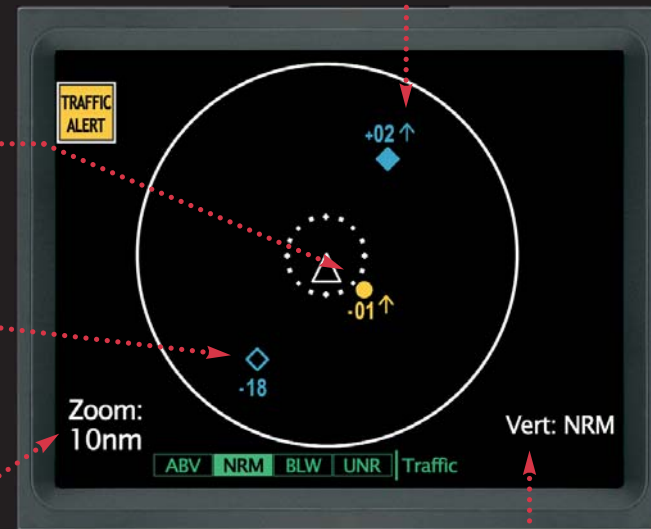
Display traffic in ranges of **2, 6 and up to 11 nmi.****

For SkyWatch HP:

Display traffic in ranges of **2, 6 and up to 35 nmi.****

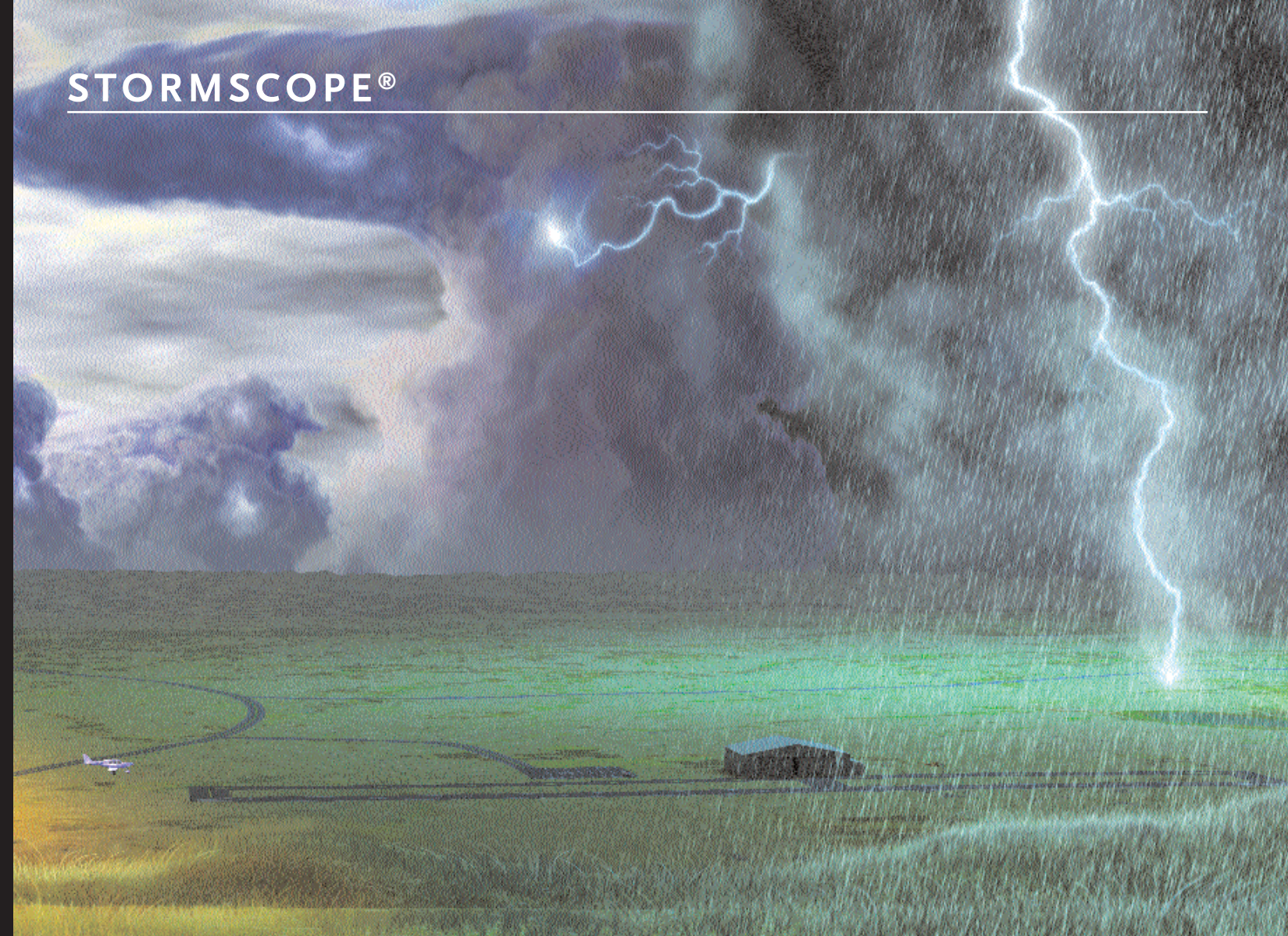
* Unrestricted Mode HP only.

** Depending on display option.



Vertical Display Mode

- UNR** Unrestricted*, displays traffic 9,900 ft above/below.
- BLW** Below, displays traffic 9,000 ft below/2,700 ft above.
- ABV** Above, displays traffic 9,000 ft above/2,700 ft below.
- NRM** Normal, displays traffic 2,700 ft above/below.



STORMSCOPE®

DISPLAY OPTIONS



Collins Pro Line 21



Stormscope & SkyWatch 3" CRT



Radar Indicator via the RGC350



Garmin 430/530/G1000



Sandel ST3400 MFD



Avidyne 500/5000

SkyWatch HP offers enhanced display options such as an ARINC 429 EFIS output for interface with compatible EFIS displays such as the Collins Pro Line 21, Pro Line 4 and Pro Line II series*, and the Universal MFD-640. The HP version, as with the original SkyWatch, allows pilots the option of interfacing with a variety of Multi-Function Displays** such as the Garmin GNS-430/530/G1000, Avidyne 500/5000/Entegra series and

Honeywell KMD 540/550/850. Additionally, traffic information may be overlaid on approved radar indicators via the L-3 Radar Graphics Computer model RGC350. SkyWatch HP can also display on the Stormscope WX-1000 CRT and select IVSI models.

* Hardware/software versions of Pro Line EFIS must be capable of displaying TCAS information. Contact Collins or L-3 for additional information.

** Call your L-3 sales or service representative for an updated list of current and pending MFD interfaces.



STORMSCOPE® WX-1000

The multi-function capability of the SkyWatch systems make it possible to share the display unit with the WX-1000 Stormscope® system. Not only do you receive real time traffic on a compact 3" Cathode Ray Tube (CRT) display, but also information on thunderstorm activity even before you leave the ground. In addition, the Stormscope model WX-1000E allows EFIS owners to display lightning detection information alongside SkyWatch HP information on their EFIS system.



STORMSCOPE® WX-500

Displaying traffic on an MFD or radar indicator? Adding the Stormscope WX-500 capability with either SkyWatch system enables traffic and lightning to be displayed simultaneously onto these displays. The range and operating modes of SkyWatch and Stormscope WX-500 are controlled directly through your MFD or radar indicator control panel, eliminating the space and cost of an extra controller.

SYSTEM SPECIFICATIONS

	SKYWATCH	SKYWATCH HP
Functional Tracking Capability	Up to 30 Targets	Up to 35 intruder aircraft
Display Range	2, 6 and up to 11 nmi	2, 6, 12, 24 and up to 35 nmi
Range Accuracy	±0.05 nmi (typical)	±0.05 nmi (typical)
Bearing Accuracy	5° RMS (typical)	5° RMS (typical)
Altitude Accuracy	±200 ft	±200 ft
Altitude Resolution	±200 ft	±100 ft
Operating/Storage Temperature	-55°C to +70°C	-55°C to +70°C
Operating Altitude	55,000 ft maximum	55,000 ft maximum
Cooling	Internal fan, convection	Internal fan, convection
TRC RECEIVER/TRANSMITTER		
Size	ARINC Standard 404A 3/8 ATR short	12.52 x 3.56 x 7.62 in
Weight	8.94 lbs (4.06 kg)	9 lbs (4.09 kg)
Voltage Input Requirements	11 to 34 V dc	18 to 32 V dc
DISPLAY OPTIONS		
	3" ATI WX-1000 CRT Display Radar indicator (using RGC350) Multi-function display**	3" ATI WX-1000 CRT Display (TAS only) Radar indicator (using RGC350) Multi-function display** ARINC 429 EFIS*
NY164 L-BAND DIRECTIONAL ANTENNA		
Size	11 x 6.25 x 1.40 in	11 x 6.25 x 1.40 in
Weight	2.3 lbs (1.04 kg)	2.3 lbs (1.04 kg)
NY156 TCAS I ANTENNA (Used when installing as TCAS I)		
Size		11 x 6.25 x 1.40 in
Weight		2.3 lbs (1.04 kg)

* Hardware/software versions of Pro Line EFIS must be capable of displaying TCAS information. Contact Collins or L-3 Avionics Systems for additional information.

** Call your L-3 Avionics Systems sales or service representative for an updated list of current and pending MFD interfaces.



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