
+00
SKYWATCH®
COLLISION AVOIDANCE
L3
Avionics Systems

SPOT THE PROBLEM.

For more than a decade, pilots have trusted SkyWatch Collision Avoidance Systems to enhance safety by helping them spot traffic. SkyWatch was the first Active Collision Avoidance System certified for general aviation. More than 12,000 systems are installed in aircraft ranging from single engine pistons to helicopters to light business jets. 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 one of the world's most trusted names in collision avoidance. 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 downtime and help keep you flying safely.

All SkyWatch systems offer Verbal Intruder Positioning (VIP) extended audio alerting. With VIP enabled, SkyWatch announces the range, bearing and relative altitude of any threat aircraft through the cockpit's audio system. VIP is just one of the many reasons more pilots choose SkyWatch.

SKYWATCH®
COLLISION AVOIDANCE SYSTEMS

SKYWATCH 497 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 11 nm* that operates independently of radar coverage**
- **Displays traffic onto almost any electronic cockpit display**
- **Tracks up to 30 aircraft simultaneously displaying eight or more of the most threatening***
- **"Look Up/Look Down" altitude display modes highlight specific layers of relative altitude—useful during climbs, descents and takeoff**
- **Optional bottom mount antenna installation, useful for helicopter applications**

*** Depending on display capability**

"TRAFFIC, TRAFFIC - 5 O'CLOCK LOW - 2 MILES"

Designed to be powerful and reliable, the SkyWatch 497 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 on a variety of digital cockpit displays including ARINC 429 EFIS displays.

The SkyWatch system's antenna was designed to TCAS specifications for GA aircraft. Not only does the single antenna reduce installation costs, but the performance meets or exceeds that of dual antenna systems.

SkyWatch Quadrapole Antenna

Other Systems' Dipole Antennas

SkyWatch's antenna also reduces the number of holes in your aircraft's skin as well as interference to/from other antennas. Unique to the SkyWatch antenna is a self-test and calibration feature that constantly maintains the bearing accuracy of tracked targets. With it, the SkyWatch system offers the most precise traffic positioning information, updated every second on your display.

SKYWATCH® HP
COLLISION AVOIDANCE SYSTEMS

SKYWATCH HP 899 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 nm* that operates independently of radar coverage**
- **Displays traffic onto almost any electronic cockpit display**
- **Tracks up to 35 aircraft simultaneously displaying eight or more of the most threatening****
- **"Look Up/Look Down" altitude display modes highlight specific layers of relative altitude—useful during climbs, descents and takeoff**
- **Optional bottom mount antenna installation, useful for helicopter applications**
- **Can be installed as a TAS or TCAS I****

*** Certain limitations may apply. See Pilot's Guide for performance specifications.**

**** Depending on display capability**

TCAS Performance Without the Price

Whether it's a TAS for a turbo-prop or a TCAS I for a business jet, look to the SkyWatch HP 899 system. Practical, cost-effective and rooted in proven technology, SkyWatch HP 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 to initiate 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 nm 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 nm 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 nm horizontal radius and a ±600 ft relative altitude
6					within 15-20 sec of CPA**
7			up		within a 0.55 nm horizontal radius and a ±800 ft relative altitude
8					within 20-30 sec of CPA**
9			fixed	not available***	within a 0.55 nm 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 nm 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 nm horizontal radius and a ±600 ft relative altitude
14					within 15-20 sec of CPA**

Sensitivity Level A Sensitivity Level B

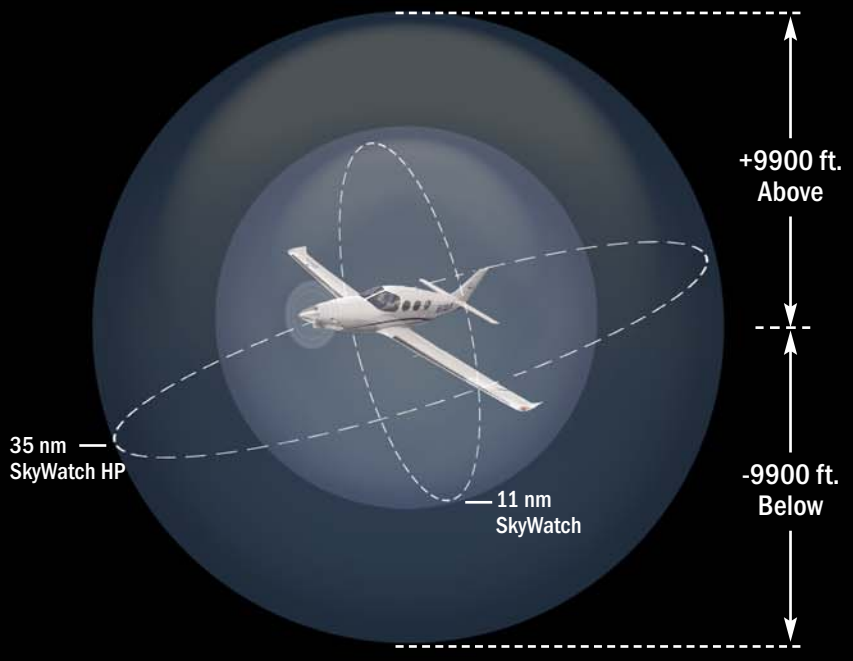
* Must have a compatible ARINC 429 radio altimeter wired to the SkyWatch system and providing valid altitude information. A compatible analog altimeter is also acceptable for SkyWatch HP systems.

** 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.



Certain limitations may apply. See Pilot's Guide for SkyWatch and SkyWatch HP performance specifications.

SKYWATCH DISPLAY SYMBOLOGY

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

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

Display Range Indicator

For SkyWatch:

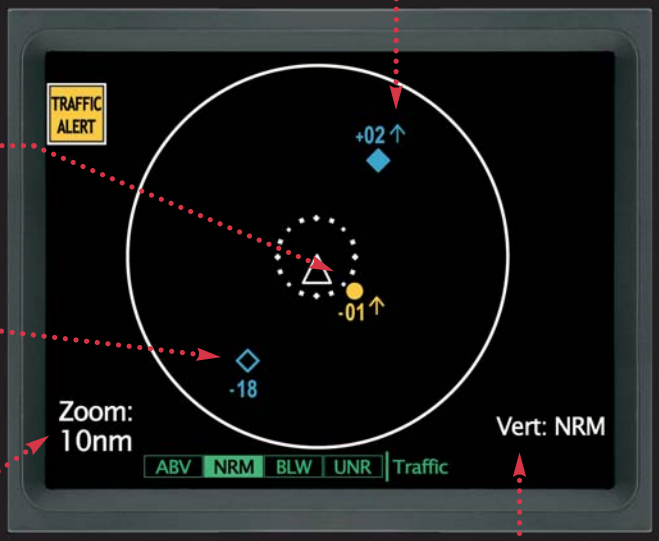
Display traffic in ranges of 2, 6 and up to 11 nm.**

For SkyWatch HP:

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

* 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.

DISPLAY OPTIONS

Rockwell Collins Pro Line Series

Garmin G1000, G900, G600, G500

Aspen EFD1000

Garmin 400/500 Series

Sandel ST3400, SN35/4500

Avidyne FlightMax/Entegra

No other collision avoidance system offers more display options than SkyWatch. Whether viewing traffic on a dedicated display or overlaid on an MFD's moving map, SkyWatch has you covered. Additionally, SkyWatch has the flexibility to drive multiple displays simultaneously and in different configurations.

Both SkyWatch 497 and 899 models offer enhanced display options such as an ARINC 429 EFIS output for interface with compatible EFIS displays from Collins, Honeywell and Universal.

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.

* 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®

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 as well as SkyWatch traffic 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 497	SKYWATCH HP 899
Functional Tracking Capability	Up to 30 Targets	Up to 35 intruder aircraft
Display Range	2, 6 and up to 11 nm	2, 6, 12, 24 and up to 35 nm
Range Accuracy	±0.05 nm (typical)	±0.05 nm (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** ARINC 429 EFIS*	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		
Size		11 x 6.25 x 1.40 in
Weight		2.3 lbs (1.04 kg)
TECHNICAL STANDARD ORDER		
	TSO-C147	TSO-C147 (TAS) TSO-C118 (TCAS I)

* 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.

L3 Avionics Systems

SKYWATCH® COLLISION AVOIDANCE SYSTEMS

5353 52nd Street, S.E.
Grand Rapids, MI 49512
Telephone: 616-949-6600
FAX: 616-285-4224
Toll Free: 800-253-9525