

ST3400H HeliTAWs™ Helicopter Terrain Safety System



A Revolution in Helicopter Safety

If you're looking for the best and the brightest, you've come to the right place.

Key Features

- Self-contained Class A HTAWS and GPWS computer - TSO C194 certified
- WireWatch™ wire-strike avoidance based on a detailed transmission line database
- Replaces radar altimeter indicator for ease of installation and superior viewability
- Exclusive TrueAlert™ technology eliminates nuisance alerts
- Displays 3-D terrain, obstacles, flightplan and traffic overlay
- Enhanced version of the industry standard ST3400 Part 25 Class A TAWS
- Ultra-high resolution 3 arc-second (300' grid) terrain
- Exceptional display performance - uses Sandel's beautiful high brightness 3-ATI display engine
- LED Backlight with 10,000+ Hour MTBF
- NVIS Option: Class B compliant per MIL-STD-3009

Combining TAWS expertise from thousands of installations in corporate and air-transport aircraft, and years of supplying civilian and military users with 3" and 4" primary displays, Sandel introduces the ST3400H HeliTAWs™ Helicopter Terrain Safety System. Exceeding the requirements of TSO C194, the ST3400H combines the most advanced HTAWS computer with the industry's best display technology to provide a single panel-mount, self-contained solution. With Sandel's TrueAlert technology, nuisance alerts are eliminated, allowing pilots to safely take off, cruise, hover and land at off-airport locations without distractions while still receiving the established benefits of Class A terrain warnings during the entire flight. The ST3400H HeliTAWs will significantly increase the safety of such demanding missions as HEMS, offshore oil rig operations, tactical military support, search and rescue, and airborne law enforcement.

ST3400H HeliTAWs

SPECIFICATIONS & INTERFACES

Display

Sandel LCD projection engine; LED-Backlight
Daylight mode: Sunlight Readable
NVIS mode: Class B compliant per MIL-STD-3009 (optional)

Weight

2.7 lbs (1.2 kg)

Dimensions

Length: 9.86 in (25.04 cm) from rear of bezel
(excluding Positronics 'D' connectors)
Body: 3.165 in x 3.165 in (8.04 cm x 8.04 cm)
Bezel: 3.285 in x 3.285 in (8.34 cm x 8.34 cm)

Power Requirements

22-33 VDC, 40 watts maximum

Cooling Requirements

Internal fan, forced air not required

Operating Environment

-20° C to +70° C
+55,000 ft. max. altitude

Mounting

Standard 3-ATI with clamp

Certification Basis

TSO C194 Helicopter Terrain Awareness and Warning System (HTAWS)
TSO C113 Airborne Multipurpose Electronic Displays
TSO C87 Airborne Low-range Radio Altimeter
TSO C118 TCAS 1
RTCA/DO-178B Software Level C
RTCA/DO-254 Hardware Level C
RTCA/DO-160F Env. Cat: [A3F1Z]BBB[UU2]XXXXXXXXZZAZ[ZW][WW]M[A3G33]XXAX

Warranty

2 years

Database

Terrain: 3 arc-second horizontal resolution (300 ft. grid), 1 foot vertical resolution
Obstacle: 1 foot vertical resolution
Airports
Transmission Lines: Optional. Contact Sandel for regional availability.

Required Input

ARINC 429 or RS-232 (TSO C145 or C146 receiver required)

GPS

Optional Inputs

Heading

ARINC 429 or XYZ Synchro (installation option: for enhanced display features)

VOR/Localizer

ARINC 429 or Low-level analog (installation option: for GPWS ILS alerting)

Glide Slope

ARINC 429 or Low-level analog (installation option: for GPWS ILS alerting)

Radar Altimeter

ARINC 429 or Analog (installation option: required for GPWS alerting)

Air Data Computer

ARINC 429 or Analog (installation option: improves altitude accuracy)

Traffic

ARINC 429 (installation option: for traffic display overlay)

Note: MIL-STD-1553 interface available as option

Outputs

Audio

500 ohm 25/150mw line-level and 4-8 ohm speaker

Discretes

GND Discretes for Caution, Warning, TAWS Inhibit, Mute, Sensitivity/Off-Airport, Radalt
MINS, Glide Slope Override

Discrete Inputs

Remote Sensitivity/TAWS Inhibit, Mute, Glide Slope Override

Display Features

Map Display

High-resolution map depicting GPS flight plan, terrain, obstacles, airports, and traffic

Terrain Display Modes

Map ranges from 0.5nm to 20nm full scale

Relative Mode (REL): Terrain color coded relative to current helicopter altitude

Topographic Mode (TOPO): Terrain shown in topographic color coding

Digital radar altitude. Pilot adjustable MINS setting

Radar Altimeter Display

Alerting Modes

TAWS

Forward Looking Terrain Avoidance

GPWS

Mode 1: Excessive Rate of Descent

Mode 3: Altitude Loss After Takeoff or Missed Approach

Mode 4: Flight Into Terrain When Not in Landing Configuration

Mode 5: Excessive Downward Glide Slope Deviation

Mode 6: Altitude Callouts



Specifications subject to change without notice.

Sandel Avionics, Inc.
2401 Dogwood Way, Vista, CA USA 92081
Phone: 760.727.4900
Fax: 760.727.4899

www.sandel.com

SANDEL®