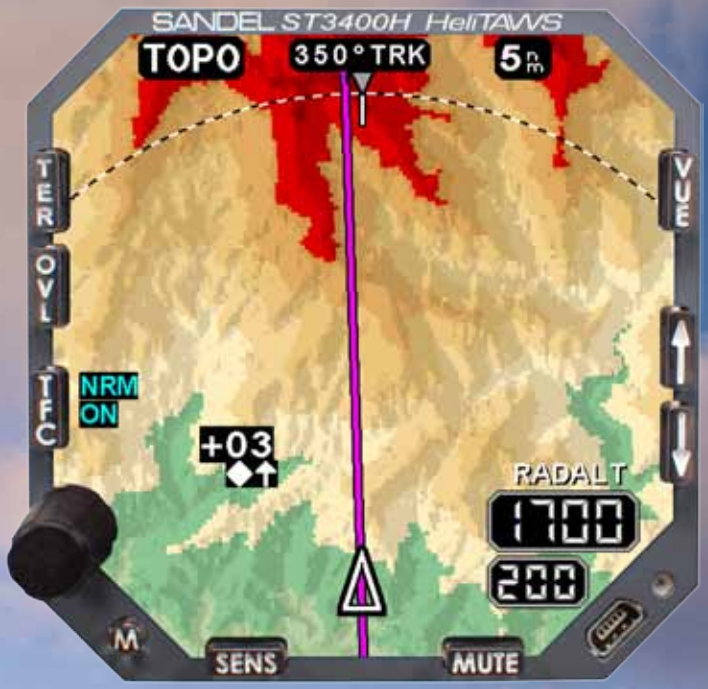
ST3400H HeliTAWS™
Helicopter Terrain Safety System



A Revolution in Helicopter Safety

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

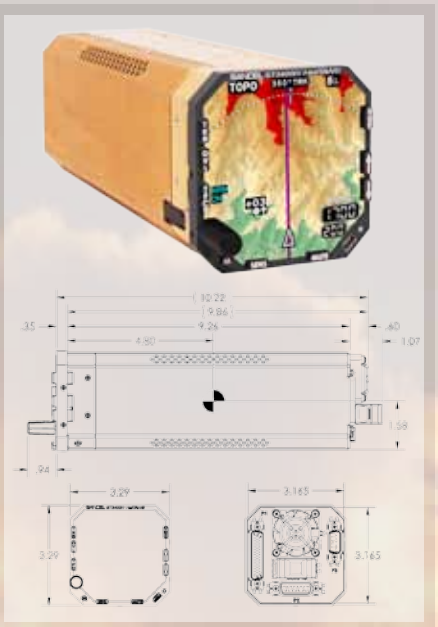
Key Features

- Self-contained Class A HTAWS and GPWS computer - TSO C194 certified
- 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]XXXXXXZZAZ[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
Required Input	
GPS	ARINC 429 or RS-232 (TSO C145 or C146 receiver required)
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
Radar Altimeter Display	Digital radar altitude. Pilot adjustable MINS setting
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®