



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

**AUG 13 2010**

In reply refer to: 130L-10-155

Sandel Avionics Inc.  
Mr. Gerald Block  
2401 Dogwood Way  
Vista, California 92081

**Transport Airplane Directorate  
Los Angeles Aircraft  
Certification Office**

3960 Paramount Boulevard  
Lakewood, California 90712-4137

Dear Mr. Block:

Sandel Avionics Inc.,  
Helicopter Terrain Awareness  
and Warning System (HTAWS)  
P/N ST3400H-(xxxx)

This is in reply to your letter dated August 12, 2010, requesting Technical Standard Order (TSO) authorization for your Helicopter Terrain Awareness and Warning System (HTAWS). The statement of conformance to TSO-C194, TSO-C113 and the incomplete TSO-C118, TSO-C87 submitted data are accepted. Effective the date of this letter, you are authorized to identify the following HTAWS with the marking requirements defined in Title 14 Code of Federal Regulations (CFR) § 21.607 (d) in TSO-C194, TSO-C113 and the incomplete TSO-C118, TSO-C87.

Loadable Data	Part Number/Software
HTAWS Software P/N: 82046-90 Version 1.00 Complex Logic (CPLD) P/N: 80205-89 Version 2.0	ST3400H-(xxxx)

Your Quality Control System, as defined in your Quality Control Manual, currently on file at the Los Angeles Manufacturing Inspection District Office, is considered satisfactory for production of this article at your Vista, California facility.

As required by the TSO, the following statement must be furnished with each manufactured unit:

“The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those installing this article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standard. TSO articles must have separate approval for installation in an aircraft. The article may be installed only if performed under 14 CFR part 43 or the applicable airworthiness requirements.”

Any design changes to this TSO article must be forwarded to this office as outlined in 14 CFR § 21.611(a) with minor changes submittal intervals not to exceed six months. Notification of changes should be made prior to shipment.

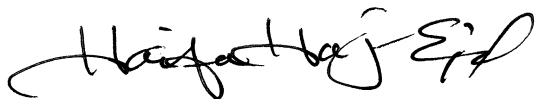
As recipient of this authorization, you are required to report any failure, malfunction, or defect relating to this authorization in accordance with the provisions of 14 CFR § 21.3. The report should be communicated initially by telephone to the Supervisor, Technical and Administrative Support Staff, ANM-103L, (562) 627-5300, within 24 hours after it has been determined the failure has occurred and followed up with a written notice. FAA Form 8010-4 (Malfunction or Defect Report) or other appropriate format is acceptable in transmitting the required details.

This authorization is not transferable to another person or location and is effective until surrendered, withdrawn, or otherwise terminated by the Administrator. This authorization pertains only to manufacturing operations at the above address. This office must be notified at least 30 days in advance of any proposed facility relocation to preclude interruption while awaiting quality control approval of that facility. As required by § 21.613(b), you must also notify the FAA when you no longer manufacture a TSO approved article.

Please note that technical data retained by the FAA may be subject to Freedom of Information Act (FOIA) request. As such, this office will notify you of all such request pertaining to your data and afford you the opportunity to defend the release of the data.

If you have any questions regarding this authorization, please contact Mr. Ha Nguyen, Project Manager, by telephone number (562) 627-5335, by e-mail [ha.nguyen@faa.gov](mailto:ha.nguyen@faa.gov), or fax number (562) 627-5210.

Sincerely,



Haifa Haj-Eid  
Supervisor, Technical and Administrative  
Support Staff