

SN4500 4-ATI PRIMARY NAVIGATION DISPLAY



Offering modular convenience and flexibility, Sandel's SN4500 Primary Navigation Display is the standard in NAV displays. Incorporating patented LED backlight technology, the SN4500 is an ideal replacement for aging 4-in. and 5-in. electromechanical HSIs. It gives your cockpit unmatched resolution, unbelievable color, and a state-of-the-art technology update.

The SN4500 boasts a MTBF greater than of 10,000 hours. With Sandel's patented display engine generating a resolution of 200 pixels per inch—unmatched in the industry for brightness clarity, readability and color fidelity—you'll find the SN4500 transforms your panel as it gives you a better view of the airspace around you.

See what's next

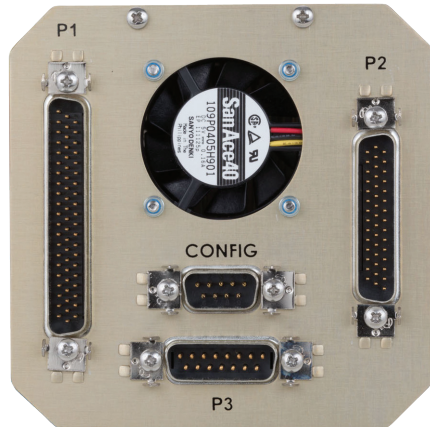
SANDEL.

SN4500 4-ATI PRIMARY NAVIGATION DISPLAY

The SN4500 improves situational awareness by presenting Compass, Map, Flight Plan, and safety systems data in a bright, high-resolution format. FAA-certified as a primary navigation display, the SN4500 even incorporates overlaid weather, along with traffic information from TCAS, TCAD & TAS receivers, to maximize situational awareness.

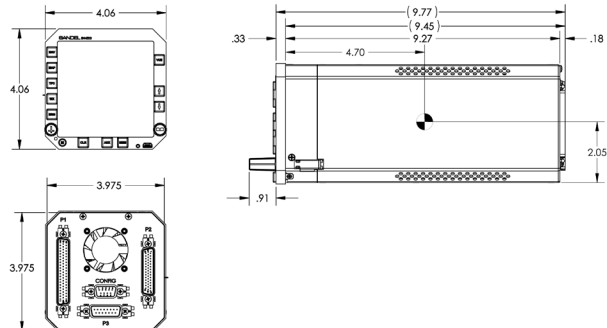


Reversionary 'Standby' Attitude Mode



Dimensions and specifications subject to change without notice.

| | | |
|-----------------------|--------|--|
| Weight | SN4500 | 3.5 lb. (1.59 kg) |
| Bracket & Connectors | | 0.5 lb (0.23 kg) |
| Dimensions | | |
| Length | | (with bezel): 9.77 in (24.82 cm) 9.45 in (24.00 cm) from panel to back of unit |
| Body | | 3.975 in x 3.975 in (10.10 cm x 10.10 cm) |
| Bezel | | 4.060 in x 4.060 in (10.312 cm x 10.312 cm) |
| Display | | LED Backlit |
| NVIS Mode | | Option Class B compatible per MIL-STD-3009 |
| Power Requirements | | 22-33 VDC 28 VDC @ 1.4A nominal (40W) |
| Cooling Requirements | | Internal fan requiring ambient air at fan input |
| Mounting | | Standard 4-ATI panel cutout with clamp and Positronic® connectors Bezel adapters available for mounting in 4x5 and 5x5 panel cutouts |
| Operating Environment | | -20° C. to +70° C. +55,000 ft. max altitude |
| Certification Basis | | TSO C113, Airborne Multipurpose Electronic Displays, and TSO C6d, C34e, C35d, C36e, C40c, C41d, C118 EASA ETSO, 2C34F, 2C35d, 2C36F, 2C40c, 2C41d, C113, C118, C119b, C6d DO-160E Env. Cat. [(A2)(F1)Z]BAB[HR]XXXXXXZBABBC[WW] M[XXE2F2X]XXAX DO-178B, Software Level C DO-254, Hardware Level C |
| Interfaces | | |
| Heading | | Bi-phase stepper (Mid-Continent 4305 & KG102) XYZ synchro (ARINC 407) ARINC 429 |
| Flux Gate | | 400-Hz XYZ 3-wire interface with external excitation (if required) |
| NAV | | Analog and ARINC 429 |
| DME | | 2 King serial or ARINC 568 digital (e.g. DME40) 1 Analog DME input (40 mV/nm) |
| ADF | | SIN/COS, Synchro and ARINC 429 |
| GPS | | ARINC 429, RS-232 and RS-422 |
| Compisite NAV | | 2 ARINC 0.5V inputs, Internal NAV Converter |
| Marker Beacons | | 3 discrete inputs |
| Switch/Annunciators | | Discrete and ARINC 429 |
| Lightning Detection | | WX-500 Stormscope® |
| Traffic (option) | | ARINC 429 (TAS, TCAD, TCAS I and TCAS II) |
| Weather (option) | | RS-232 datalink weather |
| TACAN (option) | | ARINC 429, 419, XYZ |





U.S. Department
of Transportation

**Federal Aviation
Administration**

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

3960 Paramount Boulevard
Lakewood, California 90712-4137

June 21, 2006

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

Sandel Avionics Electronic Horizontal Situation Indicator;
Technical Standard Orders C6d, C34e, C35d, C36e, C40c,
C41d, C118, C119b (incomplete TSOs)
and C113

Dear Mr. Block:

This is in reply to your letter dated March 13, 2006, requesting Technical Standard Order (TSO) authorization for your SN4500 EHSI Primary Navigation Display. The statement of conformance to TSOs C6d, C34e, C35d, C36e, C40c, C41d, C118, C119b (incomplete TSOs), and C113, and the submitted data are accepted. Effective the date of this letter, you are authorized to identify the following SN4500 EHSI Primary Navigation Display with the marking requirements defined in Title 14 Code of Federal Regulations § 21.607 (d) and in TSO C6d, C34e, C35d, C36e, C40c, C41d, C118, C119b (incomplete TSOs), and C113.

| <u>Part Number</u> | <u>Software P/N, Version</u> | <u>DESCRIPTION</u> |
|--------------------|-------------------------------|----------------------------|
| SN4500-xxx | P/N 82009-90 Version: 1.00 | Primary Navigation Display |

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.

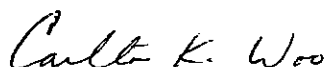
As recipient of this authorization, you are required to report any failure, malfunction, or defect relating to this authorization in accordance with the provisions of 14 CFR § 21.3. The report should be communicated initially by telephone to the Manager, Technical and Administrative Support Staff, ANM-103L, (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 14 CFR § 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 requests pertaining to your data and afford you the opportunity to defend the release of the data.

If you have any questions regarding this authorization, contact Mr. Carlton Woo, Manager, Technical & Administrative Support Staff at (562) 627- 5300, or by e-mail carlton.woo@faa.gov or FAX number (562) 627-5210.

Sincerely,



Carlton K. Woo
Manager, Technical and Administrative
Support Staff