Korea Digital Sextant

World's First Digital Sextant

Model : DS-

BERG & LARSEN

Global Distributor

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LEEYOUNG SND

World's First Digital Sextant

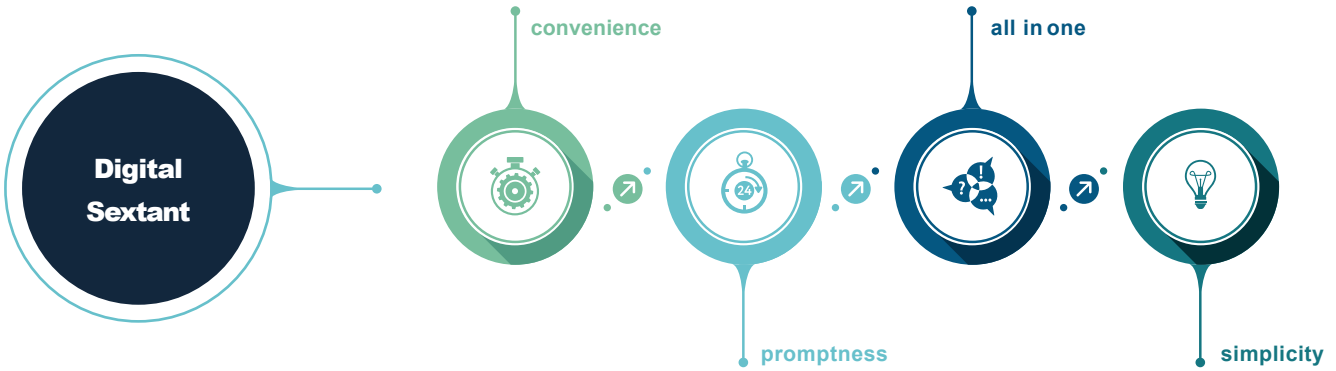
Invented and Developed for All Sailor's Convenience and Safety

Model : DS-10

The Korea Digital Sextant, developed by our company for the first time in the world, is a navigational device that facilitates the calculation of the position on a ship by mounting a Digital Unit on the existing sextant.

The Digital Unit has a built-in calculation function that automatically processes a series of procedures such as correction and calculation of Nautical Almanac, and LOP drawing, enabling quick and convenient position calculation.

Korea Digital Sextant is an emergency navigational device that guarantees the safe navigation of a ship by quickly calculating the position through celestial body sighting when the operation of GPS is restricted due to jamming or spoofing during sailing.



Existing Astronomical Positioning

Adjust Index Error

Measure Altitude using the Sextant

Record the Tim

Make corrections for Dip, Refraction, Semi-Diameter, Parallax

Refer to the Nautical Almanac to find GHA and Dec

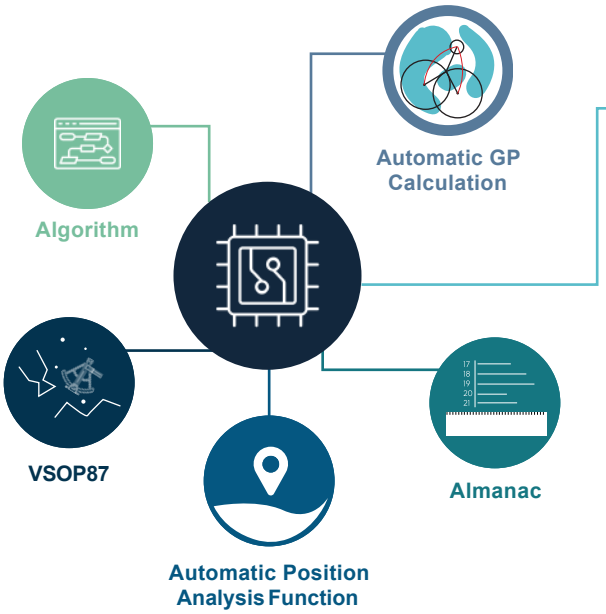
Refer to the Sight Reduction to find LHA and AP Lat

Convert the AP Lat, Dec and LHA into Zn and Hc

Fix your Position through find the Intercept and Plotting

Digital Sextant Positioning

Digital Unit



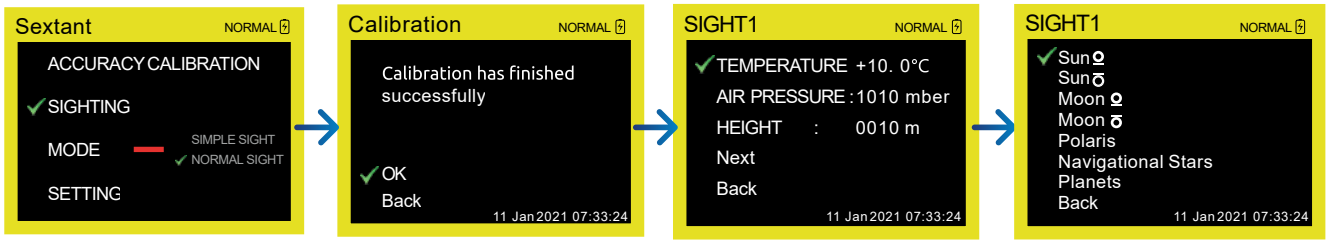
Result within 1 second after Sighting

Calibration | Sighting | Temp, Air pressure, Height, Heading and Speed | Result

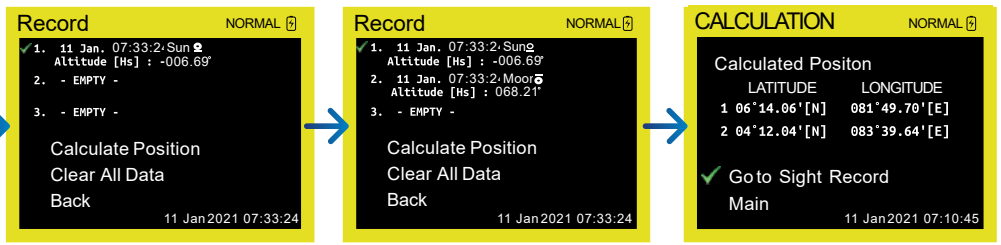
Specification of Korea Digital Sextant

Description	Specification
Processor	ARM -bit Processor
Power	V(DC) A MICRO-USB
Continuous Operating Time	Above. hours(FullyCharged)
Consuming Current	mAh
Observable Celestial Bodies	FixedSTARSIncludingtheSun
Size / Weight	mm(L)x mm(W)x mm(H)/ .kg
Working Temperature	- ℃ ~ ℃
Position Calculation Time	sec
LCD	. InchTFT

Sighting Process of Korea Digital Sextant

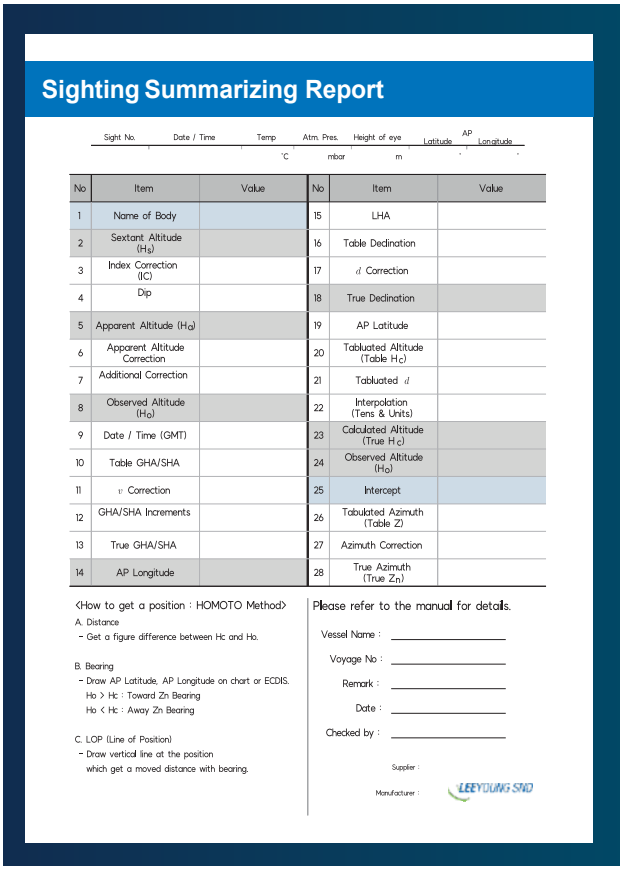


Initial Screen | Zero Calibration | Manual Input | Select Celestial Bodies



Sighting | 1st Fixing | 2nd Fixing | Result

Printing Ship's Position Calculation LOG for Vessel Inspection of OCIMF



Sighting Summarizing Report

Sight No. | Date / Time | Temp °C | Atm. Pres. mbar | Height of eye m | AP Latitude ° ' | AP Longitude ° '

No	Item	Value	No	Item	Value
1	Name of Body		15	LHA	
2	Sextant Altitude (H_S)		16	Table Declination	
3	Index Correction (IC)		17	d Correction	
4	Dip		18	True Declination	
5	Apparent Altitude (H_A)		19	AP Latitude	
6	Apparent Altitude Correction		20	Tabluated Altitude (Table H_C)	
7	Additional Correction		21	Tabluated d	
8	Observed Altitude (H_O)		22	Interpolation (Tens & Units)	
9	Date / Time (GMT)		23	Calculated Altitude (True H_C)	
10	Table GHA/SHA		24	Observed Altitude (H_O)	
11	v Correction		25	Intercept	
12	GHA/SHA Increments		26	Tabulated Azimuth (Table Z)	
13	True GHA/SHA		27	Azimuth Correction	
14	AP Longitude		28	True Azimuth (True Z_n)	

<How to get a position : HOMOTO Method>

A. Distance
- Get a figure difference between Hc and Ho.

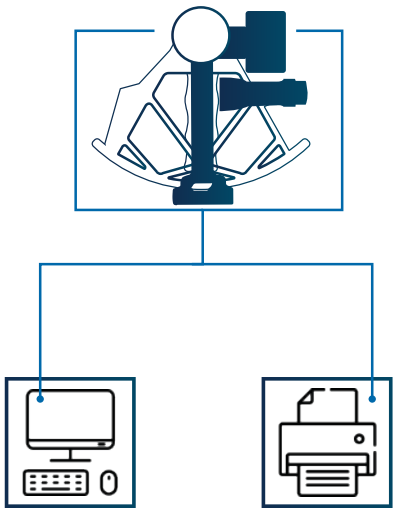
B. Bearing
- Draw AP Latitude, AP Longitude on chart or ECDIS.
  Ho > Hc : Toward Zn Bearing
  Ho < Hc : Away Zn Bearing

C. LOP (Line of Position)
- Draw vertical line at the position which get a moved distance with bearing.

Please refer to the manual for details.

Vessel Name : _____
Voyage No : _____
Remark : _____
Date : _____
Checked by : _____

Supplier :
Manufacturer : LEEYOUNG SND

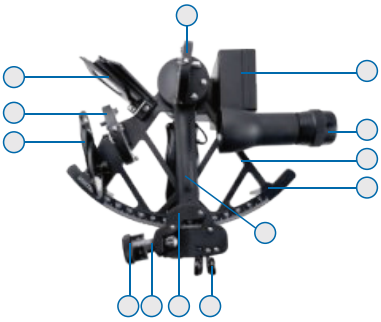


OCIMF (Oil Companies International Marine Forum)

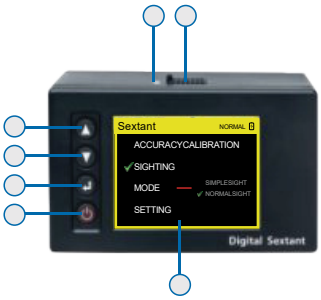
Tankers should be cross check ship's position using independent sources excluding GPS and navigation officers should be submit related log file to OCIMF inspector.

Product Description

Structure of Korea Digital Sextant



1. Horizon Shade Glasses
2. Horizon Glass
3. Index Shade Glasses
4. Index Mirror
5. Digital Unit
6. Telescope
7. Frame
8. Arc
9. Index Arm
10. Release Lever
11. Light
12. Vernier
13. Micrometer Drum
14. Light Button
15. Handle
16. Limb

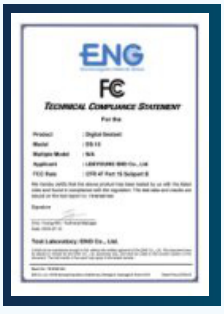


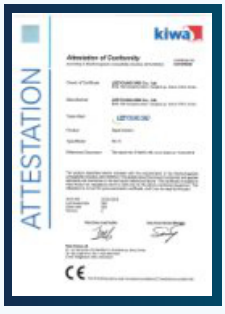
1. Power Button
2. Select Button
3. Down Button
4. Up Button
5. LED to Check Charging Status
6. Charging Connector
7. Display

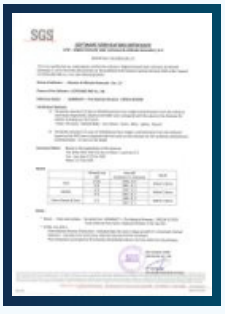
Option : EMP Shield Case for Special Ship(IEEE Std. 299)

Measurement Frequency	Shielding Rate (dB)
30 MHz	**80**
100 MHz	**80**
500 MHz	**90**
1 GHz	**84**
2 GHz	**85**
3 GHz	**83**

Certifications







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Since 2010

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