PRODUCT ADVISORY NOTICE

Ref: PAN 21/01 **Issue 3** **Date:** 13 May 2021

Product line: VisionMaster

Summary

This Product Advisory Notice describes a case where Navigational Hazards may not be presented correctly on a VisionMaster ECDIS and related products. It describes how to identify whether your products are impacted and what action to take.

Dear Mariner,

Like many ECDIS, Sperry Marine's VisionMaster ECDIS uses a third-party software library to present Electronic Navigation Charts (ENC). We have been advised by the supplier of this software library of an issue that can affect the presentation of an underwater object after a Hydrographic Office has issued an ENC Update. If the Update meets a very specific set of circumstances, our laboratory testing indicates that the following cases can potentially occur on an ECDIS or Chart Radar:

- No symbol is presented when an Isolated Danger symbol should be presented
- A different symbol is presented in place of an Isolated Danger symbol (e.g. a sounding or a wreck symbol)

In the cases that the Isolated Danger symbol is not presented correctly, the following still apply:

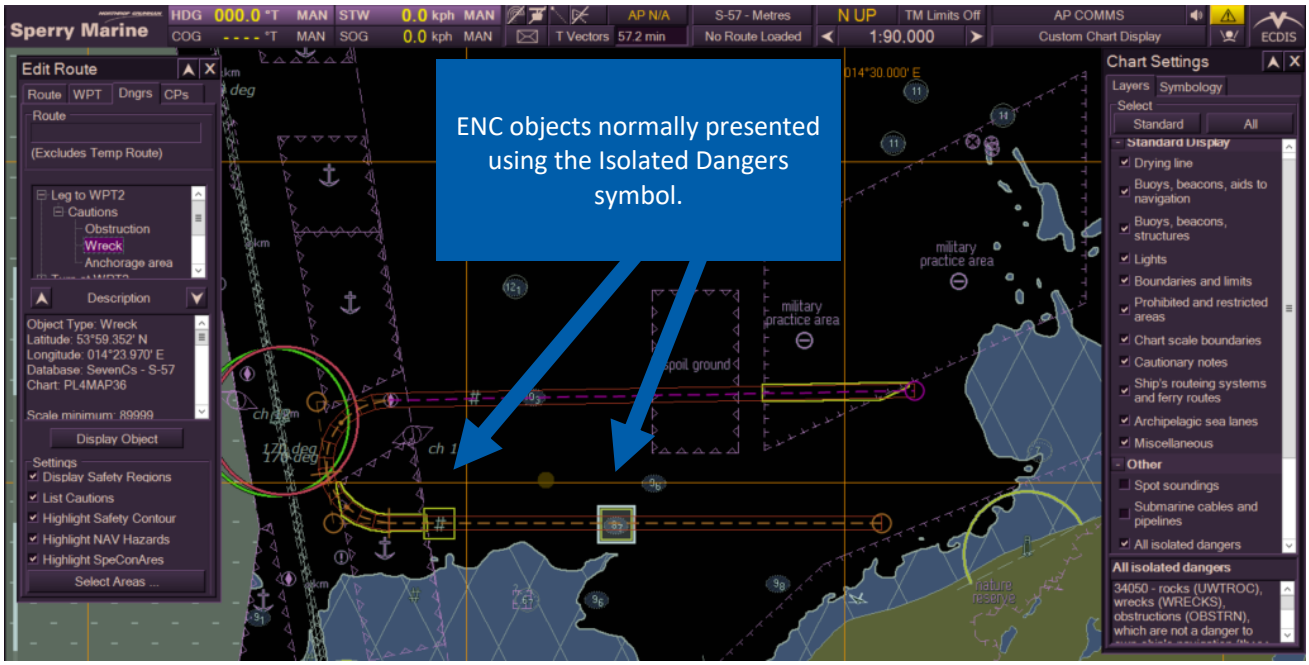
- The **highlight symbol** (a yellow square) will correctly provide a visual indication of the Navigational Hazard when Route Planning and Route Monitoring
- The correct **Navigational Hazard alert** will be raised while Route Monitoring. This alert will be visual and audible if the mariner has selected Warning priority, and visual only if the mariner has selected Caution priority
- When presented, the underwater object can be **queried (cursor pick)** to determine its depth attributes

The incorrect presentation remains until a new Edition of the ENC is issued and installed on the ECDIS. Our analysis of published ENCs indicates that, in practice, the number of underwater objects that are impacted is small. Sperry Marine are currently unaware of any occurrences of this issue being reported from the field.

What is the visual effect on the display?

The visual effect on the display will vary depending on a number of factors, including the mariner setting of the Safety Depth and the data encoded within the charted object. The image below provides an example of how the affected objects may be presented on an ECDIS during the Route Planning task. In the image, both ENC objects are presented, but a Wreck and a Sounding symbol are shown in place of the Isolated Water Danger. Note that both symbols are correctly highlighted as a Navigational Hazard. The effect is similar during Route Monitoring.

PRODUCT ADVISORY NOTICE



What action is the IHO taking?

As this issue effects a range of ECDIS manufacturers, Sperry has engaged with the IHO who are taking the following steps to ensure that the issue is not experienced in the field:

- New Editions of effected cells are to be distributed within two weeks of the date of this Product Advisory Notice (the issue is not exhibited in New Editions)
- An IHO ENC Encoding Bulletin is to be issued to Hydrographic Offices to ensure that cell Updates are coded in a way that does not exhibit the issue in the future
- Regional ENC Coordination Centres will monitor that the ENC Encoding Bulletin is enforced

What action should I take?

The above action by the IHO minimises the possibility of effected ENCs being distributed.

If you are affected by this Product Advisory Notice, Annex A provides guidance and Sperry Marine's recommendation on how to be aware of the Navigational Hazard and to revise vessel operating procedures during the period before the IHO's action takes effect.

Additionally, the next software release of all currently supported VisionMaster products will incorporate an update that prevents a recurrence of the issue. End users are recommended to incorporate this update into their maintenance schedules.

How do I know whether I am affected?

Determining whether you are affected by this Product Advisory Notice is a two-step process:

- Step 1: Identify the Chart Format used
- Step 2: Identify the Product Family & software version

Both criteria need to be met in order to be affected by the Notice.

Step 1: Chart Format

Determine whether your vessel uses any of the chart formats listed in the table below. If used, proceed to Step 2, otherwise you are not affected by this Notice.

Chart Format	Affected
S-57 (including those using the S-63 Data Protection Scheme)	Yes
C-Map SENC (CAES & Professional+)	No
ARCS (raster format)	No
VPF	No

Step 2: Product Family and software version

Determine whether your product family and software version are affected using the table below. If your product family is not listed in the table, please contact Sperry Marine directly. If your product has affected software, you are affected by this Notice. Otherwise you are not affected.

Product family	Affected software versions
VisionMaster FT	5.0.0 to 12.4
VisionMaster Net	CI 1.0.0 to CI 1.0.2
VisionMaster Navalised Display	MA 1.4.0 to MA 2.0.2
VisionMaster Surveillance Radar (Navalised)	MG 1.0.0 onwards
VisionMaster SeaGuard	CA 1.0.0 onwards

Further Questions

If you have any questions or require technical support on this matter, please use your normal point of contact for Field Service issues.

Annex A – Ensuring the Mariner is Aware of Navigational Hazards

If your system is affected, the following suggestions should be considered in order to ensure the Mariner is aware of Navigational Hazards.

Route Planning

The Route Planning task includes checking each leg for Navigational Hazards.

Navigational Hazards within the Cross Track Distance

Underwater objects lying along a leg, within the area bounded by the Cross Track Distance, and shallower than the Safety Contour will be correctly highlighted on the ECDIS by the yellow square. When the yellow highlight has no corresponding symbol inside it the ENC object representing the Navigational Hazard can be presented by selecting the **Charts | Chart Settings | Layers** menu and the **All isolated dangers** layer.

VisionMaster's Manual Chart Update feature may be used to manually record the Navigational Hazard, ensuring it is indicated while Route Monitoring.[1]

Navigational Hazards outside the Cross Track Distance – Method 1

One method to be aware of Navigational Hazards that lie outside the area bounded by the Cross Track Distance is to temporarily increase the Cross Track Distance values. Underwater objects shallower than the Safety Contour will be correctly highlighted by the yellow square and can be recorded using a Manual Chart Update as described above. The correct Cross Track Distance values should then be restored.

Navigational Hazards outside the Cross Track Distance – Method 2

Alternatively, to provide the greatest possibility that underwater objects that may be Navigational Hazards are displayed, select the **Charts | Chart Settings | Layers** menu. Select the layers normally used for Route Planning and, in addition, ensure the **All isolated dangers** layer is selected.

The Query (Cursor Pick) feature can be used to determine the depth of each underwater object displayed but not already presented as an Isolated Danger. Where the depth is shallower than the Safety Contour a Manual Chart Update can be added as described above.

[1] A Manual Chart update may be associated with the specific chart on display when the update is entered. The update is then only presented when that chart cell is on display. Manual Updates that are not associated with a chart are presented irrespective of the chart cell on display.

PRODUCT ADVISORY NOTICE

Route Monitoring

When Route Monitoring, ensure that the layers with the Manual Updates entered when Route Planning are selected for display. The layers are selected in the **Chart | Manual Chart Update | Display** menu.

Should the vessel need to deviate from the planned route, the best practice is to check for Navigational Hazards by planning a new route.

Navigational Hazards within own ship's Look-Ahead Region will be still be highlighted by the yellow square and the Navigational Hazard alert will be raised correctly. Mariners, however, should be made aware that the Navigational Hazards may be presented using symbols other than the Isolated Danger Symbol, or may not be presented at all. The size of the Look-Ahead Region should be set appropriately to reflect this situation.

Should the vessel need to deviate from a planned route, to provide the greatest possibility that underwater objects of interest are displayed, select the **Charts | Chart Settings | Layers** menu. Select the layers normally used for Route Monitoring and, in addition, ensure the **All isolated dangers** layer is selected.

© 2021 Northrop Grumman Sperry Marine B.V.
118 Burlington Road, New Malden, Surrey, KT3 4NR England
Phone +44 (0) 20 8329 2000