



Maritime and Coastguard Agency

MARINE GUIDANCE NOTE

MGN 360 (M+F)

Navigation: Implementation of Changes to Routing Measures in Electronic Navigational Charts (ENCs)

Notice to Shipowners, Masters, Deck Officers, Skippers, Chart Agents, ECDIS Original Equipment Manufacturers (OEM), ECDIS Suppliers

PLEASE NOTE:-

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position.

Summary

This note provides information on how the United Kingdom Hydrographic Office (UKHO) will promulgate future changes to routing measures in Electronic Navigational Charts (ENCs).

Key Points:

- Ascertain whether your shipboard Electronic Chart Display and Information System (ECDIS) has been type-approved to the IEC 61174 Version 1 or a later version.
- If Version 1, contact the ECDIS manufacturers to ascertain whether the system can deal with Date Start (DATSTA) / Date End (DATEND) attribution.
- If it is confirmed that the ECDIS can not apply DATSTA/DATEND attribution correctly, you are advised to order in the paper "X" chart versions and New Editions of any areas where a change to routing measures are pending, as soon as they have been published.
- Refer to the paper "X" charts up to the time the new measures are implemented and then change over completely to the New Editions of the paper charts.
- Only revert to ENC navigation when you are certain that the amended routing measures included within the ENC have been recognised by and are displayed on the ECDIS

1. Introduction/Background

1. The International Maritime Organization (IMO) routinely approve new traffic routing measures and amendments to existing measures to enhance safety of navigation and protection of the marine environment. These new or amended measures must first be scrutinised by the Routing Working Group of the Sub-Committee on Safety of Navigation and, if accepted, are normally implemented 6 months after the routing measure has been adopted by the IMO's Maritime Safety Committee (MSC). In respect of Admiralty charts, advance warnings of new or amended routing measures are promulgated through Preliminary Notices to Mariners.
2. Routing measures such as Traffic Separation Schemes (TSS), Precautionary Areas, Areas to be Avoided (ATBA), Deep Water Routes (DWR) etc are usually implemented or changed at specific times and dates e.g. 0000 UTC 1 July 2008. It is therefore essential for safe navigation that all vessels, operating an ECDIS and navigating in areas where changes to routing measures are due, display the correct representation of the relevant measures at all times.
3. The means for promulgating changes, on a specific date and time, to ENC data exists within the ENC Product Specification of the International Hydrographic Organization's (IHO) S-57 Standard. Specifically such changes are implemented by attribution of affected chart objects (e.g. an amended TSS) with DATSTA and/or DATEND. This functionality has been included in ECDIS Type Approval (IEC 61174¹ Version 2) since 2002. However users need to be aware that systems which have been type approved against the IEC 61174 Version 1 standard may not be able to recognise the Date Start/Date End attribution.
4. The United Kingdom Hydrographic Office (UKHO) already uses a system of "X" charts (for paper and Admiralty Raster Charts) which shows the current arrangements but with warnings that changes to the routing measures are due to take place on a certain date. The system allows for the "X" editions of the charts and the New Editions to be viewed simultaneously and this enables the navigator to see the "before and after" situation. This allows for passage planning and familiarisation of the new measures prior to their implementation, whilst continuing navigation on the current system. It is not, however, possible to replicate the "X" chart procedure, utilised by the UKHO, for ENCs in such scenarios, as only one version of an ENC can be current within an ECDIS at any one time. This was recognised when defining the S-57 Standard and has been catered for by the inclusion of DATSTA/DATEND attribution to relevant chart objects.
5. UKHO will therefore be issuing changes to ENCs (updates or New Editions) up to 8 weeks in advance of the implementation date by inserting the new routing measures attributed with DATSTA and, where appropriate, adding DATEND to any objects that are to be removed at the same time. On an ECDIS with the system clock set correctly to UTC, the changes will be effected automatically. The ECDIS should, however, have functionality to allow preview of the changes; in some cases this may be by advancing the computer system clock to correspond to the implementation time/date of the new measures. Where this is the case, on completion, it must be remembered to reset the ECDIS back to the correct time and date.

¹ **IEC 61174** Maritime navigation and radio-communication equipment systems - Electronic Chart Display and Information System (ECDIS) - Operational and performance requirements, methods of testing and required test results.

6. In addition, details of any new or amended routing measures are also promulgated by Preliminary (P) Notices to Mariners in advance of implementation and these are included within the ENC as text and / or picture files. Such files are accessible through the 'query' or 'review update' mechanism of the ECDIS.
7. The P Notices to Mariners and any information relating to the previous scheme will be deleted in the week following implementation. During the period from initial promulgation through to when the ECDIS is updated for Notices to Mariners following the implementation date, users of ECDIS that have been type approved to IEC 61174 Version 1 may see both the old and new routing measures displayed simultaneously, which could render the display confusing.
8. In such a situation, where the ECDIS is unable to apply the DATSTA/DATEND attribution correctly, mariners are thereby advised to order in the paper "X" charts versions and New Editions of areas where a change to routing measures are pending, as soon as they have been published. The "X" charts should be referred to up to the time the new measures are implemented before changing over completely to the New Editions of the paper charts and ENC navigation should only be resumed when users are certain that amended routing measures included within the ENC have been recognised by and are displayed on the ECDIS.

More Information

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