



**REPUBLIC OF
THE MARSHALL ISLANDS**
MARITIME ADMINISTRATOR

Marine Notice

No. 7-041-6

Rev. Dec/2016

TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF MERCHANT SHIPS, AND RECOGNIZED ORGANIZATIONS

SUBJECT: Nautical Chart and Publication Carriage and Electronic Chart Display and Information System (ECDIS) Requirements

- References:**
- (a) **SOLAS**, *International Convention for the Safety of Life at Sea, Consolidated Edition 2014*, Chapter V, as amended
 - (b) **STCW**, *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 2011 Edition*, Regulation II/1-3, as amended
 - (c) **IMO Resolution [MSC.232\(82\)](#)**, *Adoption of the Revised Performance Standards for Electronic Chart Display and Information Systems (ECDIS)*, adopted on 5 December 2006
 - (d) **IMO Resolution [A.817\(19\)](#)**, *Performance Standards for Electronic Chart Display and Information Systems (ECDIS)*, adopted on 23 November 1995
 - (e) **IMO Circular [MSC.1/Circ.1503](#)**, *ECDIS – Guidance for good practice*, dated 24 July 2015
 - (f) **IMO Circular [MSC.1/Circ.1496](#)**, *Unified Interpretation on the Appendix to the SOLAS Convention Regarding the Records of Equipment Concerning Nautical Charts and ECDIS*, dated 21 November 2014
 - (g) **IMO Circular [MSC.1/Circ.1290](#)**, *Unified Interpretation of the Term “First Survey” Referred to in SOLAS Regulations*, dated 16 December 2008
 - (h) **RMI Maritime Regulations ([MI-108](#))**, §7.41.15, *Nautical Publications*
 - (i) **RMI Marine Guideline [7-41-1](#)**, *Safety of Navigation, ECDIS, Navigation Chart Correction and Use, Speed Input to ARPA Equipped Radars and Traffic Separation Lanes*
 - (j) **RMI [Technical Circular 1, Rev.2](#)**, *Shipboard Equipment and Service Provider Approvals*, §2.0

PURPOSE

This Notice provides requirements and guidance for the carriage of nautical charts and publications in both paper and electronic formats. It supersedes Rev. 01/16 and has been revised and updated to: a) clarify requirements for designating whether paper or electronic charts are used as the primary means of navigation; b) emphasize that all navigation work must be done on the form of chart designated as the primary means of navigation; and c) further emphasize training requirements for ships fitted with ECDIS.

APPLICABILITY

This Notice is applicable to all Republic of the Marshall Islands (RMI) vessels, including fishing vessels over 150 gross tons that are engaged on an international voyage.

REQUIREMENTS

1.0 General Requirement

- 1.1 Consistent with the International Convention for the Safety of Life at Sea (SOLAS), V/19.2.1.4 and V/27, all vessels shall carry nautical charts and nautical publications necessary to plan and display the vessel's route for the intended voyage, and to plot and monitor the vessel's position throughout the voyage.
- 1.2 In addition, vessels shall carry nautical charts and publications that may be needed to safely enter a harbor of safe refuge along the intended route.

2.0 Chart Carriage Requirement

- 2.1 All vessels shall carry an adequate portfolio of nautical charts updated to the latest edition of Notices to Mariners available onboard for their planned voyage. All charts shall be of a large enough scale and have enough detail to make safe navigation of the area possible. Guidelines for maintaining a regular and efficient system for updating nautical charts are contained in RMI Marine Guideline [7-41-1](#).
- 2.2 As defined by SOLAS V/2.2, nautical charts are issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institutions.
- 2.3 Masters shall ensure that any charts required by port State regulations for ports where the vessel will be calling during a voyage are onboard and updated as necessary.
- 2.4 The RMI recognizes that an ECDIS unit satisfies the chart carriage requirement¹ of SOLAS V/19.2.1.4, provided that it meets the following criteria:
 - .1 Conforms to the relevant International Maritime Organization (IMO) performance standards;²
 - .2 Uses up to date electronic nautical charts (ENCs);
 - .3 Is maintained to be compatible with the latest applicable International Hydrographic (IHO) standards; and

1 Part A of [MSC.1/Circ.1503](#) contains a clear, detailed summary of the Chart Carriage Requirement of SOLAS, including back up requirements to ensure safe navigation in case of ECDIS failure.

2 ECDIS units fitted on or after 01 January 1996 to before 01 January 2009 must comply with IMO Resolution [A.817\(19\)](#) as amended by IMO Resolutions [MSC.64\(67\)](#) and [MSC.86\(70\)](#). ECDIS units fitted on or after 01 January 2009 must comply with IMO Resolution [MSC.232\(82\)](#).

- .4 Has an adequate, independent back-up arrangement as required by SOLAS V.19.2.1.5.
- 2.5 In areas for which ENC's have not been issued or are not of an appropriate scale for the planning and display of the vessel's voyage plan, either the ECDIS can be used in the Raster Chart Display System (RCDS) mode or paper nautical charts can be used. If an ECDIS is operated in the RCDS mode, an appropriate portfolio of up-to-date paper charts must be carried onboard and be available for use.
- 2.6 The vessel's manager is responsible for determining the form of charts to be used onboard as the primary means of navigation. The form of chart used as the primary means of navigation shall be indicated in the Company's Safety Management System (SMS).
- 2.7 All navigation work must be done on the form of chart indicated in the Company's SMS.
- 2.8 IMO Circular [MSC.1/Circ.1496](#) provides a unified interpretation for how to document the form(s) of nautical charts carried onboard on the vessel's Record of Equipment (Form E, C or P as appropriate).³

3.0 ECDIS Carriage Requirements

- 3.1 ECDIS must be fitted on specific types of vessels by the dates indicated in SOLAS V/19.2.10. Sufficient planning should be anticipated to comply with these regulatory requirements well in advance of the applicable "first survey" date, as described in IMO Circular [MSC.1/Circ.1290](#).
- 3.2 An ECDIS that is not updated to the latest version of the IHO Standards may not meet the chart carriage requirements as set out in SOLAS V/19.2.1.4. (See §2.4 above). Consistent with IMO Circular [MSC.1/Circ.1503](#), it is important that the software meet the most current IHO Standards to ensure that an ENC is correctly displayed.
- 3.3 Every ECDIS onboard must be operational and fitted in accordance with SOLAS as provided in §2.4 above.

4.0 ECDIS Training

- 4.1 The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention), Regulation II/1-3 requires approved training in the use of ECDIS as follows (see also RMI Seafarer Certification Requirements ([MI-118](#))). Additionally, Part E of IMO Circular [MSC.1/Circ.1503](#) summarizes the current ECDIS training requirements to ensure that Masters and deck officers serving onboard vessels fitted

3 If a vessel is fitted with ECDIS but paper nautical charts are designated in the Company's SMS as the primary form of navigation, the Safety Equipment Certificate should indicate that both ECDIS and nautical charts are provided as indicated in IMO Circular MSC.1/Circ. 1496, Scenario 3. Per IMO Circular MSC.1/Circ.1496 scenario 3, when paper charts are used as the primary means of navigation they may also be regarded as the ECDIS back-up arrangements.

with ECDIS meet the mandatory training requirements of the STCW Convention. These requirements apply on all ships fitted with ECDIS, even if paper charts are indicated in the Company's SMS as the primary means of navigation.

4.2 Every Master and deck officer assigned to a vessel fitted with ECDIS must be certificated as competent in the use of ECDIS as required by STCW Tables A-II/1, II/2, and II/3. This requirement applies even if an ECDIS is used for training as permitted by §4.4 below.

4.3 All Masters and deck officers are required to complete two (2) levels of training:

4.3.1 Generic (simulator) Training, to include:

.1 Knowledge of the capability and limitations of ECDIS operations including a thorough understanding of electronic navigational chart data, options in the event of loss of Global Positioning System (GPS) signal, data accuracy, presentation rules, display options and other chart data formats as well as the dangers of over-reliance; and

.2 Proficiency in operation, interpretation and analysis of information obtained from ECDIS including the use of functions that are integrated with other navigation systems, safe monitoring and adjustment of information, confirmation of vessel position by alternative means, e.g., plotting bearings and ranges, efficient use of settings to ensure conformance to operational procedures, adjustment of settings and values to suit the present conditions and situational awareness while using ECDIS.

4.3.2 Type Specific Training is to be completed in accordance with the shipboard SMS procedures prior to an officer assuming a navigational watch. It is intended to familiarize the watch officer with the basic operation of the ECDIS equipment aboard the vessel to which they are assigned, including route planning and execution.

4.4 A fitted ECDIS may be used for training if there are two fitted units onboard or the primary means of navigation is paper charts. Using ECDIS for training is not equivalent to conducting all required navigation work on the primary ECDIS or paper nautical charts. Vessel managers should provide guidance addressing the use of ECDIS for training to ensure that the safety of navigation is not compromised.

5.0 Nautical Publications

5.1 At a minimum, vessels shall carry sailing directions, lists of lights, notices to mariners, tide tables, and current table for the vessel's planned voyage in accordance with SOLAS V/19.2.1 and V/27. Other publications, including a nautical almanac and coast pilots (where issued) shall also be carried.

5.2 Masters shall ensure that any nautical publications required by port state regulations for ports where the vessel will be calling during a voyage, are onboard and updated with the latest published corrections.

- 5.3 Nautical publications shall be issued officially by or on the authority of a Government, authorized Hydrographic Office, or other relevant government institution. All nautical publications shall be currently updated to the latest edition of Notices to Mariners that is available onboard. Guidelines for maintaining a regular and efficient system for updating nautical publications are contained in RMI Marine Guideline [7-41-1](#).
- 5.4 Electronic nautical publications may be used to either partly or fully fulfill the requirements of SOLAS, Chapter V, and RMI Maritime Regulations ([MI-108](#)), §7.41.15, provided the following conditions are met:
- .1 Nautical publications required for intended voyage planning (examples include sailing directions, coast pilots, light lists, tide and current tables, etc.) must be provided with electronic or paper back-up arrangements.
 - .2 Relevant back-up copies must be corrected and ready for use when needed. When an electronic back-up is carried, portions of the publication needed for the planned voyage shall be printed and included with the voyage plan unless the electronic back-up is an independent computer system with its own emergency source of power.