



Technical Circular

No.: 018/2026

Date: 8th October 2026

Subject: IMO Guidelines on Carriage and Use of Electronic Nautical Publications (ENP) System.

1. Reference is made to SOLAS Regulations V/19.2.1.4 and V/27, which provide the following requirements in respect of nautical charts and nautical publications carried on board ships:
 - a. **SOLAS Regulation V/19.2.1.4** – All ships, irrespective of size, shall have nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage.
 - b. **SOLAS Regulation V/27** – Nautical charts and nautical publications, such as sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage, shall be adequate and up to date.
2. Further, SOLAS Regulation V/19.2.1.5 allows electronic means to partly or fully fulfil the functional requirements of SOLAS Regulation V/19.2.1.4, provided that appropriate back-up arrangements are in place.
3. In this regard, the Maritime Safety Committee (MSC), at its 111th session held from 13 to 22 May 2026, approved the **Guidelines for the Carriage and Use of Electronic Nautical Publications (ENP) Systems** vide MSC.1/Circ.1705, with the aim of ensuring standardized implementation of SOLAS Regulations V/19.2.1.4 and V/19.2.1.5.
4. The above-mentioned Circular provides requirements for the carriage and use of ENP System onboard, which includes hardware, software on which electronic nautical publications are installed, displayed, accessed & updated.
5. The salient points from the Circular are provided below:

A. Requirements on ENP system and carriage:

1) Publications included in ENP and issuing authority

An Electronic Nautical Publication (ENP) should be issued officially by or on the authority of a Government, authorized hydrographic office, or other relevant government institution in accordance with SOLAS regulation V/2.2.

2) Hardware and software

- a. The ENP system should meet the data format and processing requirements of the ENP.



. This Technical Circular and the material contained in it is provided only for the purpose of supplying current information to the reader and not as an advice to be relied upon by any person.

. While we have taken utmost care to be as factual as possible, readers/ users are advised to verify the exact text and content of the Regulation from the original source/ issuing Authority.

- b. Type approval for the ENP system is not required; however, the ENP system should not interfere with the operation of other navigation and radiocommunication equipment, and electromagnetic compatibility with other systems should be taken into account.
- c. Where the ENP system is to be used to run other software applications to support the ship's operations, it should be checked to ensure that there is no conflict between these and the software for ENP.

3) Power supply

As the ENP system should be available at all times during the voyage, the power should be supplied from the ship's main source of electrical power and also its emergency source of electrical power. However, if the ENP system has a built-in battery for portable devices, it is sufficient for the charging facilities to be supplied from both the ship's main source of electrical power and the emergency source of electrical power. The installation and use of a built-in battery or an uninterruptible power supply (UPS) is recommended, in order to eliminate fluctuations in the ship's main supply that would cause an interruption to the ENP system.

4) Display

The size and resolution of the screen of an ENP system should provide a clear display of navigation information. **A minimum screen size of 10 inches (diagonal) is recommended.** Also, when used on the navigation bridge, the screen should be able to be adjusted in brightness and contrast to enable viewing in all ambient light conditions. Especially for use in darkness, the brightness of the screen and keyboard, as applicable, should not adversely affect the night vision of the bridge watch personnel.

5) Location of ENP system

Nautical publications are required for voyage planning and should also be easily accessible by the master and officers of the watch at all times during the voyage. **Therefore, the ENP system should be located in close proximity to the navigation bridge.**

6) Backup arrangement

- a. In accordance with SOLAS regulation V/19.2.1.5, an appropriate backup arrangement for the ENP system should be provided. The backup arrangement may be a secondary ENP system or official hard copies of nautical publications. If a secondary ENP system is provided as a backup arrangement, it should also satisfy all requirements in these guidelines.

- b. If it is not possible to locate the backup arrangement in, or in the vicinity of, the navigation bridge, it may be located at another location easily accessible to officers of the watch.
- c. In case the hard copies of nautical publications are provided as a backup arrangement, they should be issued officially by or on the authority of a Government, authorized hydrographic office, or other relevant government institution in accordance with SOLAS regulation V/2.2.

B. Requirements on operation:

1) Update

In accordance with SOLAS regulation V/27, ENP, for both the primary and backup arrangements, should have a facility for updating information at least at the same interval as that provided in any hard copies of nautical publications. Nautical publications used for backup should remain updated at all times. A record of updates should be kept on board.

2) System malfunctions

The procedure for troubleshooting in case of a malfunction of the ENP system should be provided onboard. In the event of a serious malfunction which cannot be resolved by the ship's crew, repairs or remote support by shore personnel should be carried out as soon as possible. If immediate repair is not possible for both the primary and backup ENP systems, all data and information, which can be acquired from nautical publications necessary to sail to a port where repairs can be made, should be provided from the shoreside.

3) Familiarization

The crew using the ENP system should be familiarized on board with these guidelines and user manuals, if provided, to ensure that the ship's master and officers of the watch are able to use and maintain the ENP safely and effectively.

4) Cyber risk management

- a. Cyber risk management procedures should be implemented to protect the primary and back-up ENP systems (including a network system, if used) against cyber threats.
- b. It should be possible for the user to verify that ENP is authentic. This functionality should allow users to confirm that the data was issued by the relevant authority or data producer.

C. Documented procedures for operation

A documented procedure, which can be part of the ship's Safety Management System, for using and managing the ENP and ENP system should be provided on board, including but not limited to:

- Instructions for use;
- Maintenance procedures, including in case of an ENP system malfunction;
- Periodical updates;
- Backup arrangements and their management; and
- Familiarization.

6. Shipowners/operators and Masters are advised to be guided by the above requirements when the use of ENP onboard ships is authorized by the Flag Administration.

Enclosure: IMO Circular – MSC.1/Circ. 1705



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MSC.1/Circ.1705
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GUIDELINES ON CARRIAGE AND USE OF ELECTRONIC NAUTICAL PUBLICATIONS (ENP) SYSTEM

1 The Maritime Safety Committee, at its 111th session (13 to 22 May 2026), with a view to promoting safe use of electronic nautical publications, approved the *Guidelines for the carriage and use of electronic nautical publications (ENP) system*, as set out in the annex, prepared by the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) at its twelfth session (13 to 22 May 2025).

2 The aim of these Guidelines is to provide guidance on the carriage and use of ENP on board, ensuring a standardized implementation of SOLAS regulations V/19.2.1.4 and 19.2.1.5.

3 Member States are invited to bring this circular to the attention of all parties concerned.

ANNEX

GUIDELINES FOR THE CARRIAGE AND USE OF ELECTRONIC NAUTICAL PUBLICATIONS (ENP) SYSTEM

1 General

1.1 Background

1.1.1 In accordance with SOLAS regulations V/19.2.1.4 and V/27, all ships shall have nautical charts and nautical publications, as defined in SOLAS regulation V/2.2, to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage. SOLAS regulation V/19.2.1.5 allows electronic means to partly or fully fulfil the functional requirements of SOLAS regulation V/19.2.1.4, provided that there are appropriate back-up arrangements.

1.1.2 In this regard, the *IMO requirements on carriage of publications on board ships* (MSC-MEPC.2/Circ.2) expressly state that "publications may be carried in the form of electronic media such as CD-ROM in lieu of hard copies". Therefore, Electronic Nautical Publications (hereinafter referred to as ENP) may be used as a means to meet the carriage requirement of nautical publications.

1.2 Purpose

1.2.1 This document provides guidelines for the carriage and use of ENP system on board in order to unify the implementation of SOLAS regulations V/19.2.1.4, V/19.2.1.5 and V/27.

1.2.2 If the contents of nautical publications are provided by the ship's Electronic Chart Display and Information Systems (ECDIS), this document should not apply to such ECDIS equipment and does not override any ECDIS performance standards requirements.

1.2.3 Additionally, any instruction and/or guidance from national hydrographic offices or the ship's flag State, if any, should be adhered to.

1.3 Definitions

1.3.1 *Nautical publication* or *nautical chart* means a special-purpose map or book, or a specially compiled database from which such a map or book is derived, that is issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution, which:

- .1 is designed to meet the requirements of marine navigation;
- .2 is to be used on board to plan the ship's route for the intended voyage and to monitor positions throughout the voyage; and
- .3 may include sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage.

1.3.2 *Electronic Nautical Publication (ENP)* means a nautical publication which is in an electronic form.

1.3.3 An *ENP system* means a system and equipment, including hardware, software, and the ENP, on which electronic nautical publications are installed, displayed, accessed and updated.

2 Requirements on system and carriage

2.1 Publications included in ENP and issuing authority

An ENP should be issued officially by or on the authority of a Government, authorized hydrographic office, or other relevant government institution in accordance with SOLAS regulation V/2.2.

2.2 Hardware and software

2.2.1 The ENP system should meet the data format and processing requirements of the ENP.

2.2.2 Type approval for the ENP system is not required; however, the ENP system should not interfere with the operation of other navigation and radiocommunication equipment, and electromagnetic compatibility with other systems should be taken into account*.

2.2.3 Where the ENP system is to be used to run other software applications to support the ship's operations, it should be checked to ensure that there is no conflict between these and the software for ENP.

2.3 Power supply

As the ENP system should be available at all times during the voyage, the power should be supplied from the ship's main source of electrical power and also its emergency source of electrical power. However, if the ENP system has a built-in battery for portable devices, it is sufficient for the charging facilities to be supplied from both the ship's main source of electrical power and the emergency source of electrical power. The installation and use of a built-in battery or an uninterruptible power supply (UPS) is recommended, in order to eliminate fluctuations in the ship's main supply that would cause an interruption to the ENP system.

2.4 Display

The size and resolution of the screen of an ENP system should provide a clear display of navigation information. A minimum screen size of 10 inches (diagonal) is recommended. Also, when used on the navigation bridge, the screen should be able to be adjusted in brightness and contrast to enable viewing in all ambient light conditions. Especially for use in darkness, the brightness of the screen and keyboard, as applicable, should not adversely affect the night vision of the bridge watch personnel.

2.5 Location of ENP system

Nautical publications are required for voyage planning and should also be easily accessible by the master and officers of the watch at all times during the voyage. Therefore, the ENP system should be located in close proximity to the navigation bridge.

* Refer to resolution A.813(19).

2.6 Backup arrangement

2.6.1 In accordance with SOLAS regulation V/19.2.1.5, an appropriate backup arrangement for the ENP system should be provided. The backup arrangement may be a secondary ENP system or official hard copies of nautical publications. If a secondary ENP system is provided as a backup arrangement, it should also satisfy all requirements in these guidelines.

2.6.2 If it is not possible to locate the backup arrangement in, or in the vicinity of, the navigation bridge, it may be located at another location easily accessible to officers of the watch.

2.6.3 In case the hard copies of nautical publications are provided as a backup arrangement, they should be issued officially by or on the authority of a Government, authorized hydrographic office, or other relevant government institution in accordance with SOLAS regulation V/2.2.

3 Requirements on operation

3.1 Update

In accordance with SOLAS regulation V/27, ENP, for both the primary and backup arrangements, should have a facility for updating information at least at the same interval as that provided in any hard copies of nautical publications. Nautical publications used for backup should remain updated at all times. A record of updates should be kept on board.

3.2 System malfunctions

The procedure for troubleshooting in case of a malfunction of the ENP system should be provided onboard. In the event of a serious malfunction which cannot be resolved by the ship's crew, repairs or remote support by shore personnel should be carried out as soon as possible. If immediate repair is not possible for both the primary and backup ENP systems, all data and information, which can be acquired from nautical publications necessary to sail to a port where repairs can be made, should be provided from the shoreside.

3.3 Familiarization

The crew using the ENP system should be familiarized on board with these guidelines and user manuals, if provided, to ensure that the ship's master and officers of the watch are able to use and maintain the ENP safely and effectively.

3.4 Cyber risk management

3.4.1 Cyber risk management procedures should be implemented to protect the primary and back-up ENP systems (including a network system, if used) against cyber threats.

3.4.2 It should be possible for the user to verify that ENP is authentic in accordance with paragraph 2.1 of these Guidelines. This functionality should allow users to confirm that the data was issued by the relevant authority or data producer.

4 Documented procedures for operation

A documented procedure, which can be part of the ship's Safety Management System, for using and managing the ENP and ENP system should be provided on board, including but not limited to:

- instructions for use;
- maintenance procedures, including in case of an ENP system malfunction;
- periodical updates;
- backup arrangements and their management; and
- familiarization.

5 References

- MSC-MEPC.2/Circ.2 – *IMO requirements on carriage of publications on board ships*
 - MSC.1/Circ.891 – *Guidelines for on board use and application of computers*
 - MSC.1/Circ.982 – *Guidelines on ergonomic criteria for bridge equipment and layout*
 - MSC-FAL.1/Circ.3, as revised – *Guidelines on maritime cyber risk management*
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