

[emblem]
**Ministry of Infrastructure
and Transport**
**General Command of the Corps
of Harbour Masters**

6th Division – 2nd Office – 1st Section

AI SEE DISTRIBUTION LIST

TITLE OF CIRCULAR:
SAFETY OF NAVIGATION

General Series: 121/2016

Subject: Electronic publications on board vessels flying the Italian flag.

(Space reserved for
protocols, stamps and
decrees)

Regulation 2.2, Chapter V of SOLAS 74, as amended, states that a “*Nautical chart or nautical publication* is 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, authorised Hydrographic Office or other relevant government institution and is designed to meet the requirements of marine navigation”.

The subsequent regulation 19.2.1.4¹ stipulates that all ships, irrespective of size, must be equipped with 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.

This General Command has been asked on several occasions by shipping companies to assess the possibility of allowing the use of electronic nautical publications.

In view of the foregoing, the undersigned General Command, in agreement with the Working group on the safety of navigation, believes that publications on board vessels flying the Italian flag – as per Article 142 (1)

¹ 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.

letter n)² of Presidential Decree 435/91, SOLAS regulation V/27³ and MSC-MEPC.2/Circ.2 of 1 June 2006 – can also be in electronic format, in accordance with the more specific provisions quoted in the annex to this circular.

It should be noted, however, that publications to be used in the event of an emergency (International Code of Signals and IAMSAR Manual as per regulation V/21⁴) must, in any case, always be available in paper format, as they must be promptly available for use in the event of an emergency, without their use being limited to a specific location and the availability of a computer.

Finally, it should be remembered that the electronic publications required for the intended voyage, pursuant to SOLAS regulation V/27 and Article 136 (3)⁵ of Presidential Decree 435/91, must be adequate and up to date.

Circulars MSC/Circ.891 of 21/12/1998, MSC/Circ.982 of 20/12/2000 and MSC/Circ.1091 of 06/06/2003 have also been considered when drafting this circular.

Any issues encountered in the application of the contents of this circular must be raised with the 2nd Office of the 6th Division “*Safety of Navigation*” of this General Command by email (ufficio2.reparto6@mit.gov.it).

HEAD OF DIVISION
CA (CP) Luigi GIARDINO
document signed with digital signature
pursuant to Art. 21 of Legislative Decree 82/2005

² Nautical charts, directions and publications as per the aforementioned Article 136, such as sailing directions, astronomical ephemeris, lists of lighthouses, lights and maritime marks, tide tables, nautical tables, radio communications, various updating publications, rules for keeping and updating nautical publications issued by state hydrographic offices.

³ 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.

⁴ All ships which, in accordance with the present Convention, are required to carry a radio installation shall carry the International Code of Signals as may be amended by the Organisation. The Code shall also be carried by any other ship which in the opinion of the Administration has a need to use it.

All ships shall carry an up-to-date copy of Volume III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual.

⁵ The keeping and updating of charts and other nautical publications must be entrusted, as a permanent duty, to an officer on deck; the keeping and updating of publications relating to radio communications must be entrusted to the officer in charge of radio communications.

[emblem]

**General Command of the Corps of Harbour Masters
6th Division – Safety of Navigation**

Annex to General Series Circular no. 121/2016

**Electronic Publications
on board vessels flying the Italian flag.**

1. General requirements

The nautical publications required to plan the voyage must be available on the bridge and be easily accessible by the officers of the watch on the bridge at any time during the voyage. For this reason, computers used for electronic publications must be located on the bridge and in such a position that they meet the requirements laid down in SOLAS regulation V/15⁶ and in MSC/Circ.982 of 20/12/2000.

As the publications must be kept on board, access to them via the internet is not acceptable.

For the purposes of the checks carried out for various reasons on board the vessel, it must be possible to verify that the publications:

- Have been published or issued by the Authorities within the meaning of SOLAS regulation V/2.2;
- Are complete for the intended voyage; and
- Have been updated in line with the most recent edition as published and amended by the Authority in charge.

2. Hardware and software

The use of two systems is required for the visualisation of electronic publications, including one computer reserved exclusively for this use and positioned, to the Company's satisfaction, so that it is available to the officer of the watch within the shortest possible time.

These systems must not interfere with the operation of the other systems and equipment on the bridge and it must also be ensured that they comply with the provisions set out in SOLAS regulation V/17⁷.

⁶ All decisions which are made for the purpose of applying the requirements of regulations 19, 22, 24, 25, 27, and 28 of this chapter and which affect bridge design, the design and arrangement of navigational systems and equipment on the bridge and bridge procedure shall be taken with the aim of:

- .1 facilitating the tasks to be performed by the bridge team and the pilot in making full appraisal of the situation and in navigating the ship safely under all operational conditions;
- .2 promoting effective and safe bridge resource management;
- .3 enabling the bridge team and the pilot to have convenient and continuous access to essential information which is presented in a clear and unambiguous manner, using standardised symbols and coding systems for controls and displays;
- .4 indicating the operational status of automated functions and integrated components, systems and/or sub-systems;
- .5 allowing for expeditious, continuous and effective information processing and decision-making by the bridge team and the pilot;
- .6 preventing or minimising excessive or unnecessary work and any conditions or distractions on the bridge which may cause fatigue or interfere with the vigilance of the bridge team and the pilot; and
- .7 minimising the risk of human error and detecting such error if it occurs, through monitoring and alarm systems, in time for the bridge team and the pilot to take appropriate action.

⁷ 1 Administrations shall ensure that all electrical and electronic equipment on the bridge or in the vicinity of the bridge, on ships constructed on or after 1 July 2002, is tested for electromagnetic compatibility taking into account the recommendations developed by the Organisation General requirements for Electromagnetic Compatibility for all Electrical and Electronic Ship's Equipment adopted by the Organisation by resolution A.813(19).

2 Electrical and electronic equipment shall be so installed that electromagnetic interference does not affect the proper function of navigational systems and equipment.

3 Portable electrical and electronic equipment shall not be operated on the bridge if it may affect the proper function of navigational systems and equipment.

The screen and its resolution must be chosen so as to ensure clear visualisation of the data and information contained in the publications; therefore, a minimum dimension of 350 millimetres (diagonal) for the screen is strongly recommended. Furthermore, the option of changing the display's brightness and contrast must be provided, for the purpose of ensuring visualisation in any conditions of environmental light. At night, it must be ensured that the screen's light and the keyboard lighting do not affect the night vision of the officers of the watch on the bridge.

3. Protection

Computers (primary and back-up) must be protected by installing an antivirus program and by updating it using the pop-up blocker, the firewall or any other software to ensure complete protection of the computers.

4. Hardware and software updates

Hardware and software updates must be carried out promptly on the primary and back-up IT systems.

5. Updating of electronic publications

In order to satisfy the requirements of regulation V/27, digital publications must be updated with at least the same frequency that is stipulated for equivalent paper-based publications.

The database and related updates provided must be protected against any manual modification, to guarantee the integrity of the data used.

Updates must be provided by the institutions mentioned in regulation V/2.2 of SOLAS 74, as amended, on CD, or they must be sent by e-mail or be available for download on the internet. Updates must be carried out on both systems (primary and back-up) as soon as they become available.

6. Back-up

The back-up computer can consist of:

- a second computer; or
- a non-dedicated server, whereby an appropriate workstation must be identified as a back-up post. If the post is located at a distance from the bridge, a printer must be connected to it so that the data required for navigation can be printed off and made available on the bridge. Printing is not necessary if the data is available from another computer on the bridge.

7. Power supply

Both computers (primary and back-up) must be available at all times during navigation and must therefore be able to be connected to an emergency energy source, as stipulated by regulations II-1/42.2.3.2 and II-1/43.2.4.2.

8. Malfunction

In the event of a breakdown of both systems, without prejudice to the communications provided for by SOLAS I/11 (c), repairs must be carried out at the first port of call and departure may be permitted once the repairs have been carried out and only

following reconfirmation of the statutory certification, subject to submission of a service report.

In the event that there is documentary evidence that it is not possible to carry out the repairs, the Administration⁸ shall assess each case individually in order to permit a single voyage, provided the information essential for the intended navigation is available (for example, by printing off all the relevant parts of a publication).

9. Instructions for the ISM system – Training

Instructions for safe use of digital nautical publications and for their updating must be included in ISM procedures.

Officers (including the Master of the vessel) on deck must be familiar with the systems used for electronic publications and their related procedures, and must provide documentary evidence of this.

⁸ By Administration we mean the General Command of the Corps of Harbour Masters, if the vessel is outside of Italy, or the local Maritime Authority where the vessel is located, if it is in Italy.

However, if the breakdown occurred outside of Italy and then continued into the national territory, in order to maintain continuity of administrative action, said breakdown must be managed from the first moment until its resolution by the General Command, as the Flag Administration. The General Command reserves the right to involve the Maritime Authority of the vessel's landing location at a later time, in the event that this is deemed opportune and/or necessary.

Conversely, if the breakdown occurs in a national port or during navigation from a foreign port to an Italian one, without prejudice to the information provided by the Maritime Authority to this General Command, which reserves the right, as the Administration, to intervene at any time, said breakdown shall be managed, throughout its phases, until the final provision is issued, by the Maritime Authority of the port of first landing of the vessel. The foregoing shall apply without prejudice to any communications that may be issued by the Company as the event unfolds.

LIST OF ADDRESSES

ADDRESSES FOR JURISDICTION

• HARBOUR MASTER'S OFFICES	<u>ALL</u>
• MARITIME DISTRICT OFFICES	<u>ALL</u>
• LOCAL MARITIME OFFICES	<u>ALL</u>
• BEACH DELEGATIONS	<u>ALL</u>
• Bureau Veritas	bvmarine_offshore@legalmail.it
• DNV – GL	dnvitalia@legalmail.it
• RINA Services S.p.A.	rina.maricogecap@legalmail.it

ADDRESSES FOR INFORMATION

• Ministry of Infrastructure and Transport <i>General Directorate for supervision of Port Authorities, port infrastructure and maritime transport and transport by inland waterways</i> HEADQUARTERS	dg.tm@pec.mit.gov.it
• FURUNO Italia S.r.l.	furunoitaly@legalmail.it
• Generalmarine S.r.l.	generalmarine@pec.careweb.it
• Sirm S.p.A.	sirmspa@pec.it
• Telemar S.p.A.	telemar@pec.cgtelemar.com
• CONFITARMA	confitarma@confitarma.it
• FEDARLINEA	fedarlinea@pec.it
• NON-ASSOCIATED COMPANIES	<u>Send care of Division 6</u>

ADDRESSES FOR COPY

• Ministry of Infrastructure and Transport <i>General Directorate for Rail and Maritime Investigations</i> HEADQUARTERS	digifema@pec.mit.gov.it
• MARICOGECAP 2nd DIVISION	<u>HEADQUARTERS</u>
• MARICOGECAP 3rd DIVISION	<u>ROME</u>
• MARICOGECAP 7th DIVISION	<u>ROME</u>
• Genoa Maritime Directorate "C.A. (CP) Antonio DE RUBERTIS" Specialised training centre for navigational safety and maritime transport of the Corps of Harbour Masters	<u>GENOA</u>