

RESOLUTION MSC.148(77) (adopted on 3 June 2003)  
ADOPTION OF THE REVISED PERFORMANCE STANDARDS FOR NARROW-BAND DIRECT-PRINTING  
TELEGRAPH EQUIPMENT FOR THE RECEPTION  
OF NAVIGATIONAL AND METEOROLOGICAL WARNINGS  
AND URGENT INFORMATION TO SHIPS (NAVTEX)

**ANNEX 10**

**RESOLUTION MSC.148(77)  
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DIRECT-PRINTING TELEGRAPH EQUIPMENT FOR THE RECEPTION OF  
NAVIGATIONAL AND METEOROLOGICAL WARNINGS AND URGENT  
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THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, shall be performed by the Maritime Safety Committee on behalf of the Organization,

NOTING the carriage requirement in SOLAS chapter IV/7.1.4 for a receiver capable of receiving International NAVTEX narrow-band direct-printing (NBDP) broadcasts for the promulgation of navigational and meteorological warnings to shipping,

NOTING FURTHER the success of the International NAVTEX service in the promulgation of Maritime Safety Information (MSI),

NOTING ALSO with regard to the enhanced storage, processing and display possibilities offered by recent technical advances,

CONSIDERING that further growth in information promulgated to ships will be constrained by the capacity of the International NAVTEX service and the increasing importance of National NAVTEX services,

HAVING CONSIDERED the recommendations on the revision of resolution A.525(13) made by the Sub-Committee on Radiocommunications and Search and Rescue at its seventh session,

1. ADOPTS the revised Recommendation on Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX), set out in the Annex to the present resolution;

2. RECOMMENDS Governments to ensure that NAVTEX receiver equipment:

(a) if installed on or after 1 July 2005, conforms to performance standards not inferior to those specified in the Annex to the present resolution;

(b) if installed before 1 July 2005, conforms to performance standards not inferior to those specified in the Annex to resolution A.525(13).

## ANNEX

### **REVISED RECOMMENDATION ON PERFORMANCE STANDARDS FOR NARROW-BAND DIRECT-PRINTING TELEGRAPH EQUIPMENT FOR THE RECEPTION OF NAVIGATIONAL AND METEOROLOGICAL WARNINGS AND URGENT INFORMATION TO SHIPS (NAVTEX)**

#### **1 INTRODUCTION**

1.1 The equipment, in addition to meeting the requirements of the Radio Regulations, the provisions of Recommendation ITU-R M.540 applicable to shipborne equipment and the general requirements set out in resolution A.694(17), should comply with the following performance standards.

#### **2 GENERAL**

2.1 The equipment should comprise radio receivers, a signal processor and:

either

- .1 an integrated printing device; or
- .2 a dedicated display device<sup>1</sup>, printer output port and a non-volatile message memory; or
- .3 a connection to an integrated navigation system and a non-volatile message memory.

#### **3 CONTROLS AND INDICATORS**

3.1 Details of the coverage areas and message categories which have been excluded by the operator from reception and/or display should be readily available.

#### **4 RECEIVERS**

4.1 The equipment should contain one receiver operating on the frequency prescribed by the Radio Regulations for the International NAVTEX System. The equipment should contain a second receiver capable of working at the same time as the first one on at least two other frequencies recognised for the transmission of NAVTEX information. The first receiver should have priority in the display or printing of received information. Printing or displaying of messages from one receiver should not prevent reception by the other receiver.

4.2 The receiver sensitivity should be such that for a source with an e.m.f. of 2 $\mu$ V in series with a non-reactive impedance of 50  $\Omega$ , the character error rate is below 4%.

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<sup>1</sup> Where there is no printer, the dedicated display device should be located in the position from which the ship is normally navigated.

## **5 DISPLAY DEVICE AND PRINTER**

5.1 The display device and/or printer should be able to display a minimum of 32 characters per line.

5.2 If a dedicated display device is used, the following requirements should be met:

- .1 an indication of newly received unsuppressed messages should be immediately displayed until acknowledged or until 24 hours after receipt; and
- .2 newly received unsuppressed messages should also be displayed.

5.3 The display device should be able to display at least 16 lines of message text.

5.4 The design and size of the display device should be such that displayed information is easily read under all conditions by observers at normal working distances and viewing angles.

5.5 If automatic line feed entails division of a word, this should be indicated in the displayed/printed text.

5.6 When displaying received messages on a display device, a clear indication of the end of a message should be given by automatically adding line feeds after the message or including some other form of delineation. The printer or printer output should automatically insert line feeds after completing print of the received message.

5.7 The equipment should display/print an asterisk if the character is received corrupted.

5.8 Where the printer is not integrated, it should be possible to select the following data to be output to a printer:

- .1 all messages as they are received;
- .2 all messages stored in the message memory;
- .3 all messages received on specified frequencies, from specified locations or having specified message designators;
- .4 all messages currently displayed; and
- .5 individual messages selected from those appearing on the display.

## **6 STORAGE**

### **6.1 Non-volatile message memory**

6.1.1 For each receiver fitted it should be possible to record at least 200 messages of average length 500 characters (printable and non-printable) in non-volatile message memory. It should not be possible for the user to erase messages from memory. When the memory is full, the oldest messages should be overwritten by new messages.

6.1.2 The user should be able to tag individual messages for permanent retention. These messages may occupy up to 25% of the available memory and should not be overwritten by new messages. When no longer required, the user should be able to remove the tag on these messages which may then be overwritten in normal course.

## **6.2 Message identifications**

6.2.1 The equipment should be capable of internally storing at least 200 message identifications for each receiver provided.

6.2.2 After between 60 h and 72 h, a message identification should automatically be erased from the store. If the number of received message identifications exceeds the capacity of the store, the oldest message identification should be erased.

6.2.3 Only message identifications which have been satisfactorily received should be stored; a message is satisfactorily received if the error rate is below 4%.

## **6.3 Programmable control memories**

6.3.1 Information for location (B1)<sup>2</sup> and message (B2)<sup>2</sup> designators in programmable memories should not be erased by interruptions in the power supply of less than 6 h.

## **7 ALARMS**

7.1 The receipt of search and rescue information (B2 = D) should give an alarm at the position from which the ship is normally navigated. It should only be possible to reset this alarm manually.

## **8 TEST FACILITIES**

8.1 The equipment should be provided with a facility to test that the radio receiver, the display device/printer and non-volatile message memory are functioning correctly.

## **9 INTERFACES**

9.1 The equipment should include at least one interface for the transfer of received data to other navigation or communication equipment.

9.2 All interfaces provided for communication with other navigation or communication equipment should comply with the relevant international standards.<sup>3</sup>

9.3 If there is no integrated printer, the equipment should include a standard printer interface.

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<sup>2</sup> Refer Recommendation ITU-R M.540-2.

<sup>3</sup> Refer to IEC 61162.

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