SLOVENSKI STANDARD
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Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) ï Ozkopasovna neposredno pisalna telegrafska oprema za sprejemanje meteoroloģkih ali navigacijskih informacij (NAVTEX) ï 1. del: Tehniļne karakteristike in merilne metode

ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 1: Technical characteristics and methods of measurement

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document is part 1 of a multi-part deliverable covering the Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX), as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN under article 3.2 of the R&TTE directive";

Part 3: "Harmonized EN under article 3.3 (e) of the R&TTE directive".

The present document sets out the minimum requirements for a Narrow-Band Direct-Printing (NBDP) maritime receiver operating in the NAVTEX system, consisting of a radio-frequency receiver incorporating a signal processor and a printing device.

The operational arrangements applying to the NAVTEX system are laid down in ITU-R Recommendation 540-2 [2]. The message format is given in ITU-R Recommendation 625-3 [1], collective B-mode. The NAVTEX system operates on a frequency of 518 kHz.

Environmental tests are in accordance with the standard laid down in Annex VI to CEPT Recommendation T/R 34-01 [3]. Tests on conducted spurious emissions are in accordance with the arrangements described in CISPR 16 [4] sections 1 and 2 [4].

Every EN prepared by ETSI is a voluntary standard. The present document contains text concerning type approval of the equipment to which it relates. This text should be considered only as guidance and does not make the present document mandatory.

National transposition dates	
Date of adoption of this EN:	27 April 2001
Date of latest announcement of this EN (doa):	31 July 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2002
Date of withdrawal of any conflicting National Standard (dow):	31 January 2002

1 Scope

The present document states the minimum requirements for a Narrow-Band Direct-Printing (NBDP) maritime receiver operating in the NAVTEX system.

The equipment's function is to receive and print automatically and continuously, meteorological and navigational messages and Search And Rescue (SAR) messages transmitted by coast stations participating in the NAVTEX system.

The equipment shall consist of a radio-frequency receiver incorporating a signal processor and a printing device.

The message format shall conform to ITU-R Recommendation 625-3 [1], collective B-mode. The system shall conform to ITU-R Recommendation 540-2 [2].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] ITU-R Recommendation M.625-3: "Direct-printing telegraph equipment employing automatic identification in the maritime mobile service".

[2] ITU-R Recommendation M.540-2: "Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships".

[3] CEPT Recommendation T/R 34-01: "Specifications for maritime mobile radio equipment".

[4] CISPR 16: "Specification for radio disturbance and immunity measuring apparatus and methods". Second Edition 1986.

[5] Solas Convention: "The International Convention for the Safety of Life at Sea, 1974".

3 General requirements

3.1 Construction

3.1.1 The mechanical and electrical design and the construction and finish of the equipment shall accord with good engineering practice and the equipment shall be designed for use on board ships at sea.

3.1.2 All controls, instruments and terminals shall be clearly identified. Details concerning the power source with which the equipment is to be used shall be clearly indicated. A label indicating the type designation under which the equipment is being submitted for the type approval tests shall be affixed to the equipment in a place where it is clearly visible in the normal operating position.

3.1.3 It shall be possible to reduce to zero the intensity of any equipment light source other than visual alarms.

3.1.4 The radio-frequency receiver shall operate on a frequency of 518 kHz.

3.1.4.1 Where a second or third frequency is provided for the reception of maritime safety information, it shall only be possible to select these frequencies manually.

3.1.5 The equipment shall comprise a device for performing tests to verify whether the radio-frequency receiver, signal processor or printing device are working correctly.

3.1.5.1 The test shall at least provide verification of the signal's path from the antenna to the loudspeaker or to an audio-frequency output delivering sufficient power to operate a loudspeaker or earphones.

3.1.5.2 A self-return switch shall be used if a loudspeaker is used.

3.1.5.3 The signal processing unit and the printing device shall contain an integrated system for verifying their operation.

3.1.6 To limit the number of messages printed, it shall be possible to select the coast stations which it is wanted to print, by detecting the B1 characters identifying them. Messages of coast stations not selected shall not be printed.

3.1.7 The equipment shall display information indicating that the B1 characters have been selected or excluded, or this information shall be easily accessible, e.g. in printed form using the printing device.

3.1.8 It shall be possible to inhibit the printing of message categories (defined by the B2 characters), transmitted by the coast stations selected, other than navigational warnings, gale warnings and SAR messages. It shall be possible to exclude at least four different message categories.

3.1.9 The equipment shall provide a clear indication of the message categories that are excluded.

3.1.10 Means shall be provided to avoid the printing of messages which are not correctly received or which have already been correctly received.

3.1.10.1 A message is considered to have been correctly received if the character error rate is less than 4 x 10 - 2. The message identification of each such message shall be stored in memory until erased.

3.1.10.2 When the received character error rate exceeds 33 x 10 - 2 for more than 5 seconds, the printing of the message shall be inhibited, the message shall be considered as not correctly received, and the message identification shall not be stored in memory.

3.1.10.3 The equipment shall not print any message (except as defined in the following paragraph), the identification of which is already stored in memory.

3.1.11 A message shall always be printed if B3B4 = 00.

3.1.12 The equipment shall be capable of storing at least 100 message identifications in its memory.

3.1.12.1 If the number of message identifications received exceeds the memory capacity, the oldest message identification shall be erased.

3.1.12.2 However, after a period of 60 to 72 hours, a message identification shall automatically be erased from the memory.

3.1.13 An alarm indicating the reception of SAR messages shall be provided, whether incorporated in the equipment or remote from it. This alarm shall only be able to be stopped manually but without inhibiting receipt of further other alarms.

3.1.13.1 If an additional alarm is used to indicate the reception of navigational and gale warnings, it shall be capable of being suppressed.

3.1.14 The equipment may be provided with facilities to store complete messages without being printed directly, with the exception of messages with the message identity B3B4 = 00 and/or B2 = A, B, D or L, which shall always be printed upon receipt. Where such storage facilities are provided, it shall be possible at least to print out, on request, stored messages in the sequential order: last stored - first printed.

3.1.15 An alarm shall be provided to indicate that the paper has nearly run out or has run out.