



SLOVENSKI STANDARD
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Radio Equipment and Systems (RES); Technical characteristics and methods of measurement for UHF on-board communications systems and equipment

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Transposition dates	
Date of adoption:	21 February 1997
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1 Scope

This ETS states the minimum technical characteristics required for UHF radio equipment and systems operating on frequencies allocated to the maritime mobile services by the ITU Radio Regulations, appendix 20 [1].

2 Normative references

This ETS incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references subsequent references to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- [1] ITU Radio Regulations, appendix 20: "Characteristics of equipment used for on-board communication in the bands between 450 and 470 MHz".
- [2] ETR 028: "Radio Equipment and Systems (RES); Uncertainties in the measurement of mobile radio equipment characteristics".
- [3] Recommendation ITU-T P.53 (1988): "Psophometers (apparatus for the objective measurement of circuit noise)".
- [4] Recommendation ISO 694: "Positioning of magnetic compasses in ships".

3 Definitions, abbreviations and symbols

3.1 Definitions

For the purposes of this ETS, the following definition applies:

modulation index: The ratio between the frequency deviation and the modulation frequency.

3.2 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

emf	electro-motive force
ERP	effective radiated power
RF	radio frequency
SINAD	signal + noise + distortion / noise + distortion

3.3 Symbols

For the purposes of this ETS, the following symbol applies:

dBA	acoustic level in dB relative to 2×10^{-5} Pa
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4 General requirements

4.1 Construction

The mechanical and electrical construction and finish of the equipment shall conform in all respects to good engineering practice and the equipment shall be suitable for use on board ships.

The equipment's colour shall be neither orange nor yellow.

4.2 Frequencies

The equipment shall operate either on single-frequency or two-frequency simplex channels on those frequencies specified in appendix 20 of the Radio Regulations [1].

Table 1: Single frequency simplex channels

Channel designator	Frequency
Channel A	467,525 MHz
Channel B	467,550 MHz
Channel C	467,575 MHz
Channel D	457,525 MHz
Channel E	457,550 MHz
Channel F	457,575 MHz

Table 2: Two-frequency simplex channels for use with repeater only

Channel designator	Transmit frequency	Receive frequency
Channel G	467,525 MHz	457,525 MHz
Channel H	467,550 MHz	457,550 MHz
Channel J	467,575 MHz	457,575 MHz

Independent selection of transmitting and receiving frequencies shall not be possible.

The equipment shall be fitted with at least one single-frequency simplex channel, the frequency of which shall be 457,525 MHz.

It shall not be possible to transmit during channel-switching operations.

4.3 Controls

The equipment shall have the following controls: [SIST ETS 300 720:1999](https://standards.iteh.ai/catalog/standards/sist/c1186084-b274-4a8d-8fd6-258c91451008/ets-300-720-1999)

- a channel selector which shall indicate the designator of the channel to which the equipment is set;
- on/off switch for the equipment with visual indication that the equipment is switched on;
- a manual non-locking, push-to-talk switch to operate the transmitter;
- an audio-frequency power volume control.

The user shall not have access to any control which, if wrongly set, might impair the technical characteristics of the equipment.

4.4 Switching time

The channel switching arrangements shall be such that the time necessary to change over from using one of the channels to using any other channel does not exceed 5 seconds.

The time necessary to change over from transmission to reception and vice versa, shall not exceed 0,3 seconds.

4.5 Safety precautions

Provision shall be made for protecting equipment from the effects of excessive current or voltage. Means shall be incorporated to prevent reversal of polarity of the battery power supply.

Equipment with an antenna socket shall not be damaged by the effect of open-circuit or short-circuit of the antenna socket for a period of at least 5 minutes.