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**Storitev kopenskih mobilnih komunikacij - Radijska oprema za prenos podatkov (oziroma govora), ki uporablja modulacijo s konstantno ali nekonstantno ovojnico in ima antenski priključek**

Land Mobile Service - Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector

**Ta slovenski standard je istoveten z: ETSI EN 300 113 V2.3.0 (2020-03)**

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33.070.01	Mobilni servisi na splošno	Mobile services in general

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# Draft ETSI EN 300 113 V2.3.0 (2020-03)



**Land Mobile Service:**  
**Radio equipment intended for the transmission of data  
(and/or speech) using constant or non-constant  
envelope modulation and having an antenna connector**

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## Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI standards EN Approval Procedure.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
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## Modal verbs terminology

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# 1 Scope

The present document covers the technical requirements for radio transmitters and receivers used in stations in the Private Mobile Radio (PMR) service.

It applies to use in the land mobile service, operating on radio frequencies between 30 MHz and 1 GHz, with channel separations of 12,5 kHz, 20 kHz and 25 kHz, intended for speech and/or data.

**Table 1: Radiocommunications service frequency bands**

	<b>Radiocommunications service frequency bands</b>
Transmit	30 MHz to 1 000 MHz
Receive	30 MHz to 1 000 MHz

It applies to equipment for continuous and/or discontinuous transmission of data and/or digital speech.

The equipment comprises a transmitter and associated encoder and modulator and/or a receiver and associated demodulator and decoder.

The types of equipment covered by the present document are as follows:

- 1) base station (equipment fitted with an antenna connector, intended for use in a fixed location);
- 2) mobile station (equipment fitted with an antenna connector, normally used in a vehicle or as a transportable); and
- 3) those handportable stations:
  - a) fitted with an antenna connector; or
  - b) without an external antenna connector, but fitted with a permanent internal or a temporary internal 50  $\Omega$  Radio Frequency (RF) connector which allows access to the transmitter output and the receiver input.

Handportable equipment without an external or internal RF connector and without the possibility of having a temporary internal 50  $\Omega$  RF connector is not covered by the present document.

## 2 References

### 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 300 086 (V2.1.2) (08-2016): "Land Mobile Service; Radio equipment with an internal or external RF connector intended primarily for analogue speech; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".
- [2] ETSI EN 300 390 (V2.1.1) (03-2016): "Land Mobile Service; Radio equipment intended for the transmission of data (and speech) and using an integral antenna; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

- [3] Void.
- [4] Recommendation ITU-T O.153 (10/1992): "Basic parameters for the measurement of error performance at bit rates below the primary rate".
- [5] IEEE/ANSI C63.5 (2017): "American National Standard for Electromagnetic Compatibility -- Radiated Emission Measurements in Electromagnetic Interference (EMI) Control -- Calibration and Qualification of Antennas (9 kHz to 40 GHz)".
- [6] Void.
- [7] CEPT/ERC/Recommendation 74-01E: "Unwanted emissions in the spurious domain" (Siófok 1998, Nice 1999, Sesimbra 2002, Hradec Kralove 2005).
- [8] Void.

## 2.2 Informative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI TR 102 273 (V1.2.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties".
- [i.2] Void.
- [i.3] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.4] ETSI EN 300 793 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Presentation of equipment for type testing".
- [i.5] ETSI TR 100 028 (V1.4.1) (12-2001) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.6] ETSI TR 100 028-2 (V1.4.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2".
- [i.7] IEC 60489-3 (1988): "Methods of measurement for radio equipment used in the mobile services. Part 3: Receivers for A3E or F3E emissions".

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## 3 Definition of terms, symbols and abbreviations

### 3.1 Terms

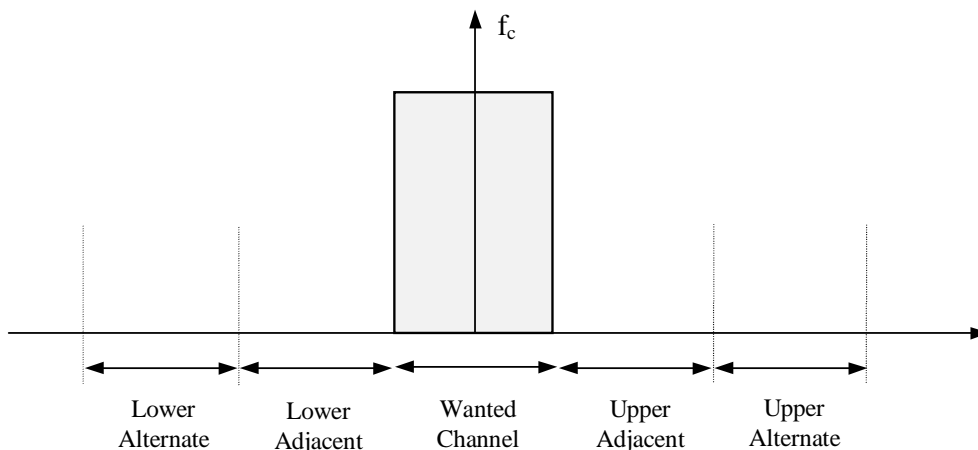
For the purposes of the present document, the following terms apply:

**50  $\Omega$** : 50 ohm non-reactive impedance

**adaptive bit rate equipments:** equipments that change bit rate such that a bit rate that is compliant with the present document is always selected if communication is not possible at other bit rates

**adjacent channels:** channel offset from the wanted channel by the channel spacing (see figure 1)

**alternate channels:** two channels offset from the wanted channel by double the channel spacing (see figure 1)



**Figure 1: Adjacent and alternate channel definitions**

**angle modulation:** either phase modulation or frequency modulation

**base station:** equipment fitted with an antenna connector, for use with an external antenna, and intended for use in a fixed location

**bit:** binary digit

**block:** smallest quantity of information that is sent over the radio channel

NOTE: A constant number of useful bits are always sent together with the corresponding redundancy bits.

**burst or transmission (physical):** one or several packets transmitted between power on and power off of a particular transmitter

**conducted measurements:** measurements which are made using direct 50  $\Omega$  connection to the equipment under test

**data transmission systems:** systems which transmit and/or receive data and/or digitized voice

**handportable station:** equipment either fitted with an antenna connector or integral antenna, or both, normally used on a stand-alone basis, to be carried on a person or held in the hand

**integral antenna:** antenna designed to be connected to the equipment without the use of a 50  $\Omega$  external connector and considered to be part of the equipment

NOTE: An integral antenna may be fitted internally or externally to the equipment.

**manufacturer:** any natural or legal person who manufactures radio equipment or has radio equipment designed or manufactured, and markets that equipment under his name or trade mark

**message:** user data to be transferred in one or more packets in a session

**mobile station:** mobile equipment fitted with an antenna connector, for use with an external antenna, normally used in a vehicle or as a transportable station

**multi-rate equipment:** equipment that supports multiple (i.e. two or more) on-air bit rates or symbol rates

**packet:** one block or a contiguous stream of blocks sent by one (logical) transmitter to one particular receiver or one particular group of receivers