SLOVENSKI STANDARD
SIST ETS 300 446 E1:2003

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Radijska oprema in sistemi (RES) ï Standard elektromagnetne združljivosti (EMC) brezvrvič nih telefonskih naprav druge generacije (CT2), ki delujejo v frekvenč nem pasu od 864,1 MHz do 868,1 MHz, vključ no s storitvami javnega dostopa

Radio Equipment and Systems (RES); ElectroMagnetic Compatibility (EMC) standard for second generation Cordless Telephone (CT2) apparatus operating in the frequency band 864,1 MHz to 868,1 MHz, including public access services

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33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

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Radio Equipment and Systems (RES); Electro-Magnetic Compatibility (EMC) standard for second generation Cordless Telephone (CT2) apparatus operating in the frequency band 864,1 MHz to 868,1 MHz, including public access services

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Foreword

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

Other standards cover radio communications equipment not listed in the scope.

This ETS is based upon the Generic Standards EN 50081-1 [1] and EN 50082-1 [2], and other standards, where appropriate.

Transposition dates	
Date of adoption of this ETS:	30 June 1996
Date of latest announcement of this ETS (doa):	30 September 1996
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 March 1997
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1 Scope

This European Telecommunication Standard (ETS) covers the assessment of radio communication and ancillary equipment in respect of Electro-Magnetic Compatibility (EMC). Technical specifications related to the antenna port and emissions from the enclosure port of radio equipment are found in the related product standards I-ETS 300 131 (1992) [3], and I-ETS 300 131 (1994) second edition [4].

This ETS specifies the minimum performance and the methods of measurements of EMC on second generation Cordless Telephone (CT2) apparatus and ancillary equipment.

This ETS specifies the applicable EMC tests, the limits, and the performance criteria for digital radio equipment as described in I-ETS 300 131 [3] or [4], operating in the frequency range 864,1 to 868,1 MHz, and for the associated ancillary equipment.

The environment classification used in this ETS refers to the environment classification used in the Generic Standards EN 50081-1 [1], EN 50082-1 [2], except the vehicular environment class which refers to ISO 7637 [6].

The EMC requirements have been selected to ensure an adequate level of compatibility for apparatus at residential, commercial, light industrial and vehicular environments. The levels however, do not cover extreme cases which may occur in any location but with a low probability of occurrence.

This ETS may not cover those cases where a potential source of interference which is producing individually repeated transient phenomena, or a continuous phenomena, is permanently present, e.g. a radar or broadcast site in the near vicinity. In such a case it may be necessary to use special protection applied to either the source of interference, or the interfered part, or both.

Compliance of radio equipment to the requirements of this ETS does not signify compliance to any requirement related to the use of the equipment (i.e. licensing requirements).

Compliance to this ETS does not signify compliance to any safety requirements. However, it is the responsibility of the assessor of the equipment that any observation regarding the equipment becoming dangerous or unsafe as a result of the application of the tests of this ETS, should be recorded in the test report.

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 listed hereafter. For dated references, subsequent amendments 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] EN 50081-1 (1992): "Electromagnetic compatibility - Generic emission standard - Part 1: Residential, commercial and light industry".

[2] EN 50082-1 (1992): "Electromagnetic compatibility - Generic immunity standard - Part 1: Residential, commercial and light industry".

[3] I-ETS 300 131 (1992): "Radio Equipment and Systems (RES); Common air interface specification to be used for the interworking between cordless telephone apparatus in the frequency band 864.1 MHz to 868.1 MHz, including public access services".

[4] I-ETS 300 131 (1994): 2nd Edition "Radio Equipment and Systems (RES); Common air interface specification to be used for the interworking between cordless telephone apparatus in the frequency band 864,1 MHz to 868,1 MHz, including public access services".

[5] I-ETS 300 176: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Approval test specification".

[6] ISO 7637 (1990): "Road vehicles - Electrical disturbance by conducting and coupling; Part 1: Passenger cars and light commercial vehicles with nominal 12 V supply voltage"; and "Part 2: Commercial vehicles with nominal 24 V supply voltage - Electrical transient conduction along supply lines only".

[7] EN 55022 (1994): "Limits and methods of measurement of radio interference characteristics of information technology equipment".

[8] CISPR Publication No. 16: "Specification for radio disturbance and immunity measuring apparatus and methods"; Part 1: "Radio disturbance and immunity measuring apparatus".

[9] ENV 50140: "Electromagnetic compatibility - Basic immunity standard - Radiated, radio frequency electromagnetic field; Immunity test".

[10] EN 60801-2 (1993): "Electromagnetic compatibility for industrial-process measurement and control equipment - Part 2: Electrostatic discharge requirements".

[11] IEC 801-4 (1988): "Electromagnetic compatibility for industrial process measurement and control equipment; Part 4: Electrical fast transients / burst requirements".

[12] ENV 50141: "Electromagnetic compatibility - Basic immunity standard - Conducted disturbances induced by radio-frequency fields".

[13] EN 61000-4-11: "Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 11: Voltage dips, short interruptions and voltage variations immunity tests".

[14] ENV 50142: "Electromagnetic compatibility - Basic immunity standard - Surge immunity test".

3 Definitions and abbreviations

3.1 Definitions

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

ancillary equipment: Equipment (apparatus), used in connection with a receiver or transceiver is considered as an ancillary equipment (apparatus) if:

- the equipment is intended for use in conjunction with a receiver, or transceiver to provide additional operational and/or control features to the radio equipment (e.g. to extend control to another position or location); and

- the equipment cannot be used on a stand alone basis to provide user functions independently of a receiver or transceiver; and

- the receiver or transceiver to which it is connected, is capable of providing some intended operation such as transmitting and/or receiving without the ancillary equipment (i.e. it is not a sub-unit of the main equipment essential to the main equipment basic functions).

base station equipment: Used to describe CT2 equipment including CFPs (cordless fixed parts) and/or CPPs (cordless portable parts) as defined in I-ETS 300 131 [3] [4] which are powered via an ac power input port or a dc power input port.

CT2 equipment: Apparatus which includes one or more transceivers and/or receivers and/or parts thereof which conform to the requirements of clause 4 of I-ETS 300 131 [3] [4].

host equipment: Any equipment which has a complete user functionality when not connected to the CT2 radio equipment, and to which the CT2 radio equipment provides additional functionality, and to which connection is necessary for the CT2 radio equipment to offer functionality.

integral antenna: An antenna designed to be connected to the equipment without the use of an external connector and considered to be part of the equipment. An integral antenna may be fitted internally or externally to the equipment.

manufacturer: The legal entity responsible for placing the product on the market.

mobile equipment: Used to describe all CT2 equipment powered by a vehicular power supply.

port: A particular interface of the specified equipment (apparatus) with the external electro-magnetic environment.

portable equipment: Used to describe all CT2 equipment powered by an internal battery.

NOTE: More than one of the equipment classifications may apply to certain equipment, as described in subclause 5.2, dependent upon the manufacturer's declaration of normal intended use.

3.2 Abbreviations

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

FP	Cordless Fixed Part
CT2	second generation Cordless Telephone
CPP	Cordless Portable Part
EMC	Electro-Magnetic Compatibility
ESD	Electro-Static Discharge
EUT	Equipment Under Test
LISN	Line Impedance Stabilisation Network
RF	Radio Frequency
RMS	Root Mean Square
SPL	Sound Pressure Level

4 General test conditions

4.1 Test conditions

The equipment shall be tested under normal test conditions contained in the relevant product and basic standards or in the information accompanying the equipment, which are within the manufacturer's declared range of humidity, temperature, and supply voltage.

The test conditions shall be recorded in the test report.

The test configuration shall be as close to normal intended use as possible and shall be recorded in the test report.

Whenever the Equipment Under Test (EUT) is provided with a detachable antenna, the EUT shall be tested with the antenna fitted in a manner typical of normal intended use.

For CT2 equipment parts for which connection to a host equipment is necessary to offer functionality the test configuration shall be as defined in subclause 5.4.

4.2 Arrangements for test signals at the input of the transceiver

4.2.1 Speech equipment

Audio input signals may be connected to the EUT either by a non-metallic acoustic tube or, if provided, by electrical connections. The CT2 equipment shall not be modified to provide any electrical connection ports