



SLOVENSKI STANDARD
SIST ETS 300 433:2000

01-julij-2000

Radijska oprema in sistemi (RES) - Radijska oprema za CB (Citizens Band) z amplitudno modulacijo in dvobočnim oziroma enobočnim prenosom - Tehnične karakteristike in merilne metode

Radio Equipment and Systems (RES); Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated Citizens Band (CB) radio equipment; Technical characteristics and methods of measurement

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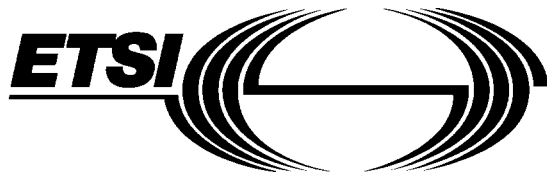
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Technical characteristics and methods of measurement**

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Foreword

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

Every ETS prepared by ETSI is a voluntary standard. This ETS contains text concerning the type approval of equipment to which it relates. This text does not make this ETS mandatory in its status as a standard. However, this ETS can be referenced, wholly or in part, for mandatory application by decisions of regulatory bodies.

Transposition dates	
Date of adoption of this ETS:	29 September 1995
Date of latest announcement of this ETS (doa):	28 February 1996
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 August 1996
Date of withdrawal of any conflicting National Standard (dow):	31 August 1996

The national regulations on Citizens' Band (CB) equipment that permit the use of other types of modulation or power levels will not necessarily be affected by the adoption of this ETS.

Introduction

This ETS is intended to specify the minimum performance and the methods of measurement of CB Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated radio equipment as specified in the Scope.

Clause 5 provides the corresponding limits. These limits have been chosen to ensure an acceptable grade of service and to minimise harmful interference to other equipment and services.

Administrative arrangements (e.g. for type approval, marking, antennas), and conditions for the use of CB DSB and/or SSB amplitude modulated radios are to be determined by the national regulatory authorities.

This ETS may be used by European notified accredited test laboratories for the assessment of the performance of the equipment. In order to avoid any ambiguity in that assessment, this standard contains instructions for the presentation of equipment for type testing purposes (clause 4), conditions (clauses 6 and 7) and measurement methods (clauses 8 and 9).

This standard was drafted on the assumption that:

- a) the type test measurements would be performed only once in one of the accredited test laboratories, and then accepted by the various authorities in order to obtain type approval;
- b) if equipment available on the market is required to be checked it should be tested in accordance with the methods specified in this ETS.

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1 Scope

This European Telecommunications Standard (ETS) applies to Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated Citizen's Band (CB) radio equipment operating in the frequency band 26,960 MHz to 27,410 MHz with a channel spacing of 10 kHz, and intended for analogue speech and/or data transmission.

This ETS covers the minimum characteristics considered necessary in order to make the best use of the available frequencies. It does not necessarily include all the characteristics that may be required by a user, nor does it necessarily represent the optimum performance achievable.

This ETS covers base stations, mobile stations and two categories of hand-portable stations.

This ETS is complementary to ETS 300 135 [1] which concerns angle modulated CB radio equipment (CEPT PR 27).

Any CB equipment covered by this ETS that can also work with angle modulation is also required to meet ETS 300 135 [1].

This ETS is based upon existing national standards.

This ETS applies to equipment with a socket for an external antenna and to equipment with an integral antenna.

In the case of equipment that is intended for use with either an integral antenna or an external antenna, the equipment is specified to be measured as equipment intended for use with an external antenna and specified to meet the appropriate limits. In addition to this the following characteristics of the transmitter and receiver are specified to be measured as for equipment for use with an integral antenna and the appropriate limits are defined:

- transmitter carrier power;
- spurious emissions of the transmitter;
- spurious radiation of the receiver.

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 relate to the publications listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- [1] ETS 300 135 (1991): "Radio Equipment and Systems (RES); Angle-modulated Citizens' Band radio equipment (CEPT PR 27 Radio Equipment). Technical characteristics and methods of measurement".
- [2] CISPR Publication No 16-1 (1993): "Specification for radio disturbance and immunity measuring apparatus and methods; Part 1: Radio disturbance and immunity measuring apparatus".
- [3] CCITT Recommendation O.41 (1988): "Psophometer for use on telephone-type circuits".
- [4] ETR 028 (1992): "Radio Equipment and Systems (RES); Uncertainties in the measurement of mobile radio equipment characteristics".

3 Definitions, abbreviations and symbols

3.1 Definitions

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

base station: Equipment fitted with an antenna socket, for use with an external antenna, and intended for use in a fixed location.

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

hand-portable station: Equipment fitted either with an antenna socket, an integral antenna, or both, normally used on a stand-alone basis, to be carried on a person or held in the hand.

integral antenna: An antenna designed to be connected to the equipment without the use of a 50 Ω external connector and considered to be part of the equipment. An integral antenna may be fitted internally or externally to the equipment.

Double Side Band (DSB) modulation: DSB amplitude modulation (A3E).

Single Side Band (SSB) modulation: SSB amplitude modulation with suppressed carrier (J3E), using the Upper Side Band (USB) or the Lower Side Band (LSB).

3.2 Abbreviations

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

ac	alternating current
A3E	DSB amplitude modulation
CB	Citizens' Band
dBA	relative sound level in dB incorporating A-weighting curve
DSB	Double Side Band
emf	electro-motive force
IF	Intermediate Frequency
J3E	SSB amplitude modulation with suppressed carrier
LSB	Lower Side Band
PEP	Peak Envelope Power
ptt	push-to-talk
RF	Radio Frequency
rms	root mean square
SINAD	SND/ND
SND/N	(Signal + Noise + Distortion)/(Noise)
SND/ND	(Signal + Noise + Distortion)/(Noise + Distortion)
SSB	Single Side Band
USB	Upper Side Band

3.3 Symbols

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

E_o	reference field strength, (see annex A)
R_o	reference distance, (see annex A)

4 General

4.1 Presentation of equipment for testing purposes

The manufacturer shall provide a production model of the equipment for type testing.

Tests shall be carried out on the highest and lowest channel within the switching range of the equipment and on a channel near the middle of the switching range. The switching range of the receiver and transmitter shall be declared by the manufacturer.

NOTE: The switching range is the maximum frequency range over which the receiver or the transmitter can be operated without reprogramming or realignment.

In the case of equipment fitted with one channel only, all tests are carried out on that channel.

In the case of equipment fitted with two channels, all tests are carried out on both channels.

4.2 Mechanical and electrical design

4.2.1 General

The equipment submitted by the manufacturer or his representative, shall be designed, constructed and manufactured in accordance with sound engineering practice, and with the aim to minimise harmful interference to other equipment and services.

4.2.2 Controls

Those controls which, if maladjusted might increase the interfering potentialities of the equipment or improper functioning of the transceiver, shall not be accessible to the user.

4.2.3 Marking

The marking shall be in accordance with the requirements of the national regulatory authorities.

4.3 Interpretation of the measurement results

The interpretation of the results recorded in a test report when making the measurements described in this ETS shall be as follows:

- a) the measured value related to the corresponding limit shall be used to decide whether an equipment meets the minimum requirements of this ETS;
- b) the actual measurement uncertainty for each particular measurement shall be included in the test report;
- c) the values, of the actual measurement uncertainty shall be, for each measurement, equal to or less than the figures given in clause 10 (table of measurement uncertainty).