

Characteristics of DAB receivers

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50248:2002 sisaldab Euroopa standardi EN 50248:2001 ingliskeelset teksti.	This Estonian standard EVS-EN 50248:2002 consists of the English text of the European standard EN 50248:2001.
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Käsitlusala: This standard describes the DAB (Digital Audio Broadcasting) receiver characteristics for consumer equipment intended for terrestrial and cable reception operating in band III and L- band and for satellite reception in L-band. Dedicated receivers for specific applications are not within the mandate of this standard	Scope: This standard describes the DAB (Digital Audio Broadcasting) receiver characteristics for consumer equipment intended for terrestrial and cable reception operating in band III and L- band and for satellite reception in L-band. Dedicated receivers for specific applications are not within the mandate of this standard
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English version

Characteristics of DAB receivers

Caractéristiques du récepteur DAB

Eigenschaften von DAB-Empfängern

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 206, Consumer equipment for entertainment and information and related sub-systems.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50248 on 2000-08-01.

This European Standard supersedes EN 50248:1997.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-02-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-08-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given for information only. In this standard annexes A and C are informative and annex B is normative.

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1 Scope

This standard describes the DAB (Digital Audio Broadcasting) receiver characteristics for consumer equipment intended for terrestrial and cable reception operating in band III and L-band and for satellite reception in L-band. Dedicated receivers for specific applications are not within the scope of this standard.

2 Normative references

This European Standard 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 amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 50255, *Digital Audio Broadcasting system – Specification of the receiver data interface (RDI)*

EN 55013¹⁾, *Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment (CISPR 13, mod)*

EN 55020¹⁾, *Electromagnetic immunity of broadcast receivers and associated equipment - Limits and methods of measurement of immunity characteristics of sound and television broadcast receivers and associated equipment*

EN 60169-24, *Radio-frequency connectors - Part 24: Radio-frequency coaxial connectors with screw coupling, typically for use in 75 ohm cable distribution systems (Type F)*

EN 60315-4, *Methods of measurement on radio receivers for various classes of emission - Part 4: Receivers for frequency-modulated sound broadcasting emissions*

EN 61606, *Audio and audiovisual equipment – Digital audio parts - Basic methods of measurement of audio characteristics (IEC 61606)*

EN 61938, *Audio, Video and audiovisual systems – Interconnection and matching values. Preferred matching values of analogue signals (IEC 61938)*

EN 300 401, *Digital Audio Broadcasting to mobile, portable and fixed receivers. (DAB system standard).*

IEC 60169-10, *Radio-frequency connectors - Part 10: R.F. coaxial connectors with inner diameter of outer conductor 3 mm (0,12 in) with snap-on coupling - Characteristic impedance 50 ohms (Type SMB)*

IEC 60315-1, *Methods of measurement on radio receivers for various classes of emission - Part 1: General considerations and methods of measurement, including audio-frequency measurement (harmonized as HD 560.1)*

IEC 60958-3, *Digital audio interface - Part 3 : Consumer applications*

IEC 61937, *Interface for non-linear PCM encoded audio bitstreams applying to IEC 60958*

ISO/IEC 11172-3, *Coding of moving pictures and associated audio for digital storage media at up to 1,5 Mbit/s - Part 3: Audio*

¹⁾ An amendment concerning digital receivers is in preparation.

ISO/IEC 11172-4, *Coding of moving pictures and associated audio for digital storage media at up to 1,5 Mbit/s - Part 4: Compliance testing*

ISO/IEC 13818-3, *Generic coding of moving pictures and associated audio information - Part 3: Audio*

ISO/IEC 13818-4, *Generic coding of moving pictures and associated audio information - Part 4: Compliance testing*

ETSI TR 101 496-2, *Digital Audio Broadcasting system (DAB) - Guidelines and rules of implementation and operation. Volume 2: System feature.*

ETSI TS 101 757, *Digital Audio Broadcasting system (DAB) - Conformance Testing for DAB Audio*

3 Terms and definitions

For the purpose of this European Standard, the following definitions apply.

Other definitions, abbreviations and symbols are solely related to DAB unless stated otherwise.

3.1

DAB receiver

receiver which is intended to receive and decode programmes transmitted according to the DAB system specification EN 300 401

NOTE Figure 1 shows an example of a functional block diagram of a DAB Receiver according to EN 300 401(for information only).

3.2

minimum requirement

is the lowest value that a DAB receiver should fulfil in order to be called a DAB receiver. It takes into account low cost receivers

4 Basic implementation and functional performance requirements

4.1 Audio decoder

The audio decoder function of a DAB receiver shall conform to the subset of ISO/IEC 11172-3 as defined in EN 300 401. The conformity is described in ETSI TS 101 757. The audio decoder should include an error concealment method which may be based on the ScF-CRC (Scale Factor-Cyclic Redundancy Check) as defined within EN 300 401. If for any reason the data stream cannot be decoded, the receiver shall mute.

The audio part shall be able to decode DAB bit streams corresponding to both 24 and 48 kHz sampling frequencies.

It shall comply with ISO/IEC 11172-3 and ISO/IEC 13818-3 (bit-rates above 256 kHz/s are optional).