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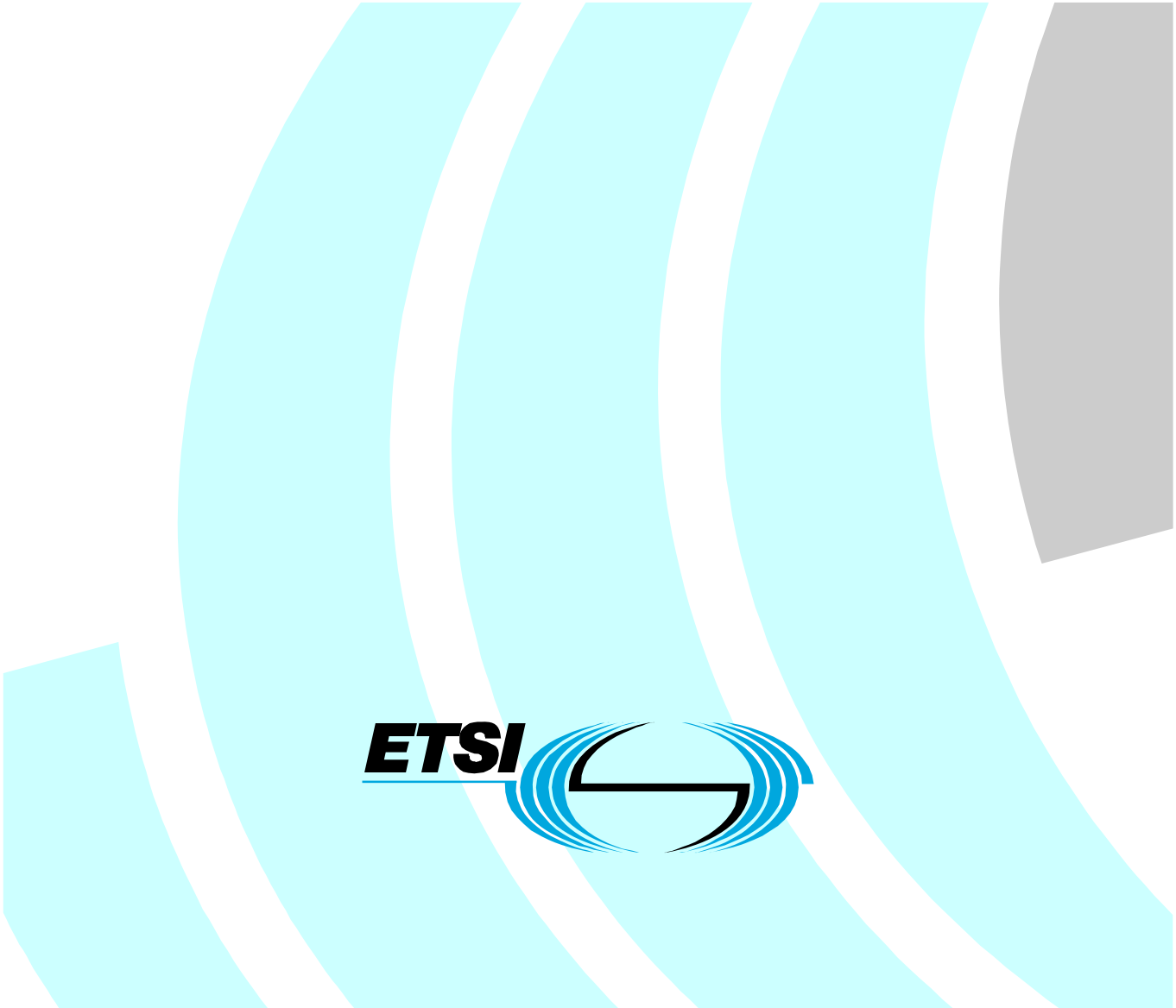
European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Part 1: Technical characteristics and test methods



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Contents

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

Consumer audio equipment intended for audio and voice operating below 50 MHz and using narrow band modulation are considered and tested according to EN 300 220 [i.3]. Consumer radio microphones and in ear monitoring equipment may be tested to either EN 300 422 [i.4] for equipment with maximum occupied bandwidth < 200 kHz or to the present document for equipment with maximum occupied bandwidth > 200 kHz with due consideration of power and operating frequency.

Electromagnetic Compatibility (EMC) requirements are covered by EN 301 489-9 [i.5].

The present document is part 1 of a multi-part deliverable covering cordless audio devices in the range 25 MHz to 2 000 MHz; as identified below:

Part 1: "Technical characteristics and test methods";

Part 2: "Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive".

National transposition dates	
Date of adoption of this EN:	10 November 2008
Date of latest announcement of this EN (doa):	28 February 2009
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2009
Date of withdrawal of any conflicting National Standard (dow):	31 August 2009

Introduction

In preparing the present document, attention has been given to assure a low interference probability, while at the same time allowing a maximum flexibility and service to the end-user.

The harmonized standard EN 301 357-2 [i.6] provides the necessary parameters for equipment to obtain presumption of conformity with article 3.2 of the R&TTE Directive [i.1]. Common technical specifications and harmonized frequency allocations are expected to reduce the present problems of interference and illegal use.

The present document may be used for conformity testing based on spectrum utilization parameters and does not include performance characteristics that may be required by the user or requirements for interfacing equipment.

If you are planning to use RDS please go to: http://www.rds.org.uk/rds98/rds98.htm for further information.

1 Scope

The present document covers the minimum characteristics for cordless audio devices 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.

Cordless audio devices covered within the present document are considered, by definition, Short Range Devices (SRD), the power limits for different frequency bands can be found in the current version of CEPT/ERC/REC 70-03 [i.2], annex 13 (or European or national regulations).

Stereo equipment can be designed for required channel bandwidths of 200 kHz or less, however consumer wideband (multi channel) audio equipment and stereo equipment using e.g. Zenith-GE pilot tone systems or digital modulation may need wider bandwidths as defined in the present document.

The present document is intended to specify the minimum performance and the methods of measurement of cordless audio equipment in the range 25 MHz to 2 000 MHz, including:

- cordless headphones;
- cordless loudspeakers;
- consumer radio microphones in the range 863 MHz to 865 MHz;
- in-ear monitoring equipment using either 300 kHz bandwidth analogue modulation or 300 kHz, 600 kHz, 1 200 kHz digital FDMA modulation in the range 863 MHz to 865 MHz;
- in-vehicle cordless;
- personal cordless;
- broadband multi channel audio systems;
- Band II LPD (low power devices) in the 87,5 MHz to 108 MHz range (Broadcasting Band II) using up to 200 kHz bandwidth and analogue modulation;
- and other devices and frequency bands defined within CEPT/ERC/REC 70-03 [i.2], European or National regulation.

The frequency bands for this equipment may differ from country to country as specified in their national regulations. All equipment is intended to be used with integral antennas.

Annex A provides normative specifications concerning radiated measurements.

Annex B provides the test configuration for the measurement of necessary bandwidth.

Annex C provides informative parameters on the receiver part, which are intended to give guidance to manufacturers.

Annex D provides information on the derivation of radiated emissions limits for Band II LPD.

Annex E provides a justification for field strength limits for Band II LPD.

Annex F provides details of a typical test layout for Band II LPD.

Annex G contains the Bibliography.