

# TECHNICAL REPORT

## RAPPORT TECHNIQUE



INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE  
COMITÉ INTERNATIONAL SPÉCIAL DES PERTURBATIONS RADIOÉLECTRIQUES

**Database on the characteristics of radio services**

**Base de données des caractéristiques des services radioélectriques**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## DATABASE ON THE CHARACTERISTICS OF RADIO SERVICES

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CISPR 31, which is a technical report, has been prepared by CISPR subcommittee H: Limits for the protection of radio services.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) replacement of CISPR 23 as reference standard for the determination of limits by CISPR 16-4-4:2007 on "model for the calculation of limits for the protection of radio services".

The text of this technical report is based on the following documents:

|                 |                  |
|-----------------|------------------|
| Enquiry draft   | Report on voting |
| CISPR/H/228/DTR | CISPR/H/234/RVC  |

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
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## DATABASE ON THE CHARACTERISTICS OF RADIO SERVICES

### 1 Scope

This Technical Report covers the rationale behind the actual database covering the characteristics of radio services. The database is a “living document” in the format of a spreadsheet file in the EMC Zone of the IEC web site (<http://www.iec.ch/emc/database>).

The objective of the database is to register those characteristics which are relevant for derivation and specification of limits for disturbance emissions from electric and/or electronic equipment, systems and installations. Committees responsible for generic and/or product emission EMC standards should use this information together with CISPR 16-4-4.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CISPR 16-4-4:2007, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-4: Uncertainties, statistics, and limit modelling – Statistics of complaints and a model for the calculation of limits for the protection of radio services*

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The database content is comprised of objective radio system characteristics and subjective information on typical intended usage.

### 4 Outline of database

The explanation of the columns in the spreadsheet is given in Table 1.

**Table 1 – Explanation of columns in the spreadsheet**

| Characteristics                          | Explanation/purpose                                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Radio system (name)                      | Identification of the system                                                                                                  |
| Reference document (specification)       | Reference to the system specification                                                                                         |
| Receiving frequency band (MHz)           | Frequency band in MHz specified by the band edge frequencies                                                                  |
| Field strength to protect or sensitivity | Typically the lowest useable field strength or specified sensitivity in dB( $\mu$ V/m)                                        |
| Protection ratio R (dB)                  | Ratio of the minimum useable field strength for the wanted RF signal to the maximum acceptable level of an interfering signal |
| Receiving antenna gain Gr (dB)           | Typical gain in dB in the main lobe of an antenna intended for use with a system                                              |
| Receiving bandwidth Brec (kHz)           | Bandwidth in kHz between “–3 dB” points                                                                                       |
| Isolation distance d (m)                 | Typical distance in m between a receiver and a likely source of interference                                                  |