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INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

**Television broadcast receivers
and associated equipment –
Immunity characteristics –
Methods of objective picture assessment**



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CONTENTS

FOREWORD.....	3
1 Scope	5
2 Normative references	5
3 Abbreviations	5
4 Test method for objective picture assessment	5
5 Methodology for detection of analogue picture degradations	6
5.1 Algorithm for superimposed patterns, moiré patterns	6
5.2 Algorithm for loss of luminance and contrast	7
5.3 Algorithm for loss of colour	7
5.4 Algorithm for loss of synchronisation	7
6 Methodology for detection of digital picture degradations	8
6.1 Algorithm for blocking	8
6.2 Algorithm for frozen patterns, stop of moving element	8
6.3 Algorithm for total loss of picture, irrecoverable data stream error.....	8
7 Alternative methodology for detection of digital picture degradations	9
7.1 Test pattern	9
7.2 Analysis	9
7.3 Comparison	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TELEVISION BROADCAST RECEIVERS AND ASSOCIATED EQUIPMENT –
IMMUNITY CHARACTERISTICS –
METHODS OF OBJECTIVE PICTURE ASSESSMENT**

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CISPR 29, which is a technical report, has been prepared by CISPR subcommittee I: Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers.

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

Enquiry draft	Report on voting
CISPR/II/104/DTR	CISPR/II/119/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 maintenance result 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;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

TELEVISION BROADCAST RECEIVERS AND ASSOCIATED EQUIPMENT – IMMUNITY CHARACTERISTICS – METHODS OF OBJECTIVE PICTURE ASSESSMENT

1 Scope

This Technical Report describes the algorithms used for objective picture assessment in immunity tests of analogue and digital TV broadcast receivers and associated equipment.

The algorithms used were developed on the basis of the specifications included in Annex K¹ of CISPR 20. The method of objective picture assessment described in that annex employs the same interference mechanism and is based on the same wanted signal definition as specified in CISPR 20. Objective picture assessment, therefore, constitutes an alternative to the subjective method and offers the advantage of direct correlation to the subjective method.

2 Normative references

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

CISPR 20:2002, *Sound and television broadcast receivers and associated equipment – Immunity characteristics – Limits and methods of measurement*
Amendment 1 (2002)

ITU-R BT.500-10, *Methodology for the subjective assessment of the quality of television pictures*

ITU-R BT.801-1, *Test signals for digitally encoded colour television signals conforming with Recommendations ITU-R BT.601 (Part A) and ITU-R BT.656*

3 Abbreviations

For the purposes of this document, the following abbreviations apply.

CCVS	composite colour video signal (chrominance, video, blanking and sync signal)
DCT	discrete cosine transform
EUT	equipment under test
HSL	hue, saturation, luminance (colour space model)
SSCQE	(single stimulus continuous quality evaluation)

4 Test method for objective picture assessment

Objective picture assessment is based on comparison with a reference picture or a reduced reference picture.

Both the reference picture and the test picture can be recorded from the EUT monitor by means of a video camera or at the EUT's video output (CCVS) direct.

¹ See Amendment 2 to CISPR 20:2002, to be published.