
Methods of measurement on receivers for satellite broadcast transmissions in the 12 GHz band -- Part 2: Electrical measurements on DBS tuner units (IEC 61079-2:1992)

Methods of measurement on receivers for satellite broadcast transmissions in the 12 GHz band -- Part 2: Electrical measurements on DBS tuner units

Meßverfahren für Empfänger für Satellitenrundfunk-Übertragungen im 12-GHz-Bereich -- Teil 2: Elektrische Messungen an Satellitenempfängern

Méthodes de mesure sur les récepteurs d'émissions de radiodiffusion par satellite dans la bande 12 GHz -- Partie 2: Mesures électriques sur les syntoniseurs pour la radiodiffusion directe par satellite

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Part 2: Electrical measurements on DBS tuner units
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(IEC 1079-2:1992)

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

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FOREWORD

At the request of the 73rd CENELEC Technical Board, the International Standard IEC 1079-2:1992 was submitted to the CENELEC Unique Acceptance Procedure (UAP) in November 1992 for acceptance as a European Standard.

The text of the International Standard was approved by CENELEC as EN 61079-2 on 22 September 1993.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-09-01
- latest date of withdrawal of conflicting national standards (dow) 1994-09-01

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

ENDORSEMENT NOTICE

The text of the International Standard IEC 1079-2:1992 was approved by CENELEC as a European Standard without any modification.

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ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

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.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
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107-1	1977	Recommended methods of measurement on receivers for television broadcast transmissions - Part 1: General considerations - Electrical measurements other than those at audio-frequencies	-	-
1079-1	1992	Methods of measurement on receivers for satellite broadcast transmissions in the 12 GHz band - Part 1: Radio-frequency measurements on outdoor units	EN 61079-1	1993
569	1977	Informative guide for subjective tests on television receivers	-	-

Other publications

-
- CCIR Recommendation 421-1:1966 - Requirements for the transmission of television signals over long distances (System I excepted)
- CCIR Recommendation 500-3:1986 - Method for the subjective assessment of the quality of television pictures

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Part 2:

Electrical measurements on DBS tuner units

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*Méthodes de mesure sur les récepteurs d'émissions
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Partie 2:

*Mesures électriques sur les syntoniseurs
pour la radiodiffusion directe par satellite*

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International Electrotechnical Commission
Telefax: +41 22 919 0300

e-mail: inmail@iec.ch

3, rue de Varembe Geneva, Switzerland
IEC web site <http://www.iec.ch>



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**METHODS OF MEASUREMENT ON
RECEIVERS FOR SATELLITE BROADCAST TRANSMISSIONS
IN THE 12 GHz BAND**

Part 2: Electrical measurements on DBS tuner units

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

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This part of International Standard IEC 1079 has been prepared by Sub-Committee 12A: Receiving equipment, of IEC Technical Committee No. 12: Radiocommunications.

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The text of this part is based on the following documents:

Six Months' Rule	Report on Voting
12A(CO)132	12A(CO)136

Full information on the voting for the approval of this part can be found in the Voting Report indicated in the above table.

METHODS OF MEASUREMENT ON RECEIVERS FOR SATELLITE BROADCAST TRANSMISSIONS IN THE 12 GHz BAND

Part 2: Electrical measurements on DBS tuner units

SECTION 1 - GENERAL

1.1 Scope

This part of IEC 1079 applies to the tuner unit of a receiver for the direct reception of satellite broadcast transmissions in the 12 GHz band. The channels are those defined by WARC BS-77 and RARC SAT-83 [1]* and the systems are those of CCIR Recommendation 650 [1].

The object of this part of IEC 1079 is to define the conditions and methods of measurement to be applied. This part does not specify performance requirements.

The tuner unit comprises the channel selector and FM demodulator. The input to this unit is a group of intermediate frequency signals, usually in the range 1 GHz to 2 GHz, which is provided from an associated outdoor unit. The outdoor unit includes at least a microwave antenna and the frequency converter to the first intermediate frequency.

Methods of measurement on outdoor units are described in Part 1 of International Standard IEC 1079.

A decoder for baseband and data signals may be included in the tuner unit. Methods of measurement of the decoder, however, are described in Parts 4 and 5 of International Standard IEC 1079 (under consideration).

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1079. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1079 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 107-1: 1977, *Recommended methods of measurement on receivers for television broadcast transmissions - Part 1: General considerations - Electrical measurements other than those at audio-frequencies.*

* The figures in square brackets refer to the Bibliography (annex A).

IEC 1079: 1992, *Methods of measurement on receivers for satellite broadcast transmissions in the 12 GHz band - Part 1: Radio-frequency measurements on outdoor units.*

IEC 569: 1977, *Informative guide for subjective tests on television receivers.*

CCIR Recommendation 421-1: 1966, *Requirements for the transmission of television signals over long distances (System I excepted)*

CCIR Recommendation 500-3: 1986, *Method for the subjective assessment of the quality of television pictures.*

1.3 Definitions

For the purpose of this part of IEC 1079, the following definitions apply.

1.3.1 DBS tuner unit

The function of this unit is to select a desired channel from a group of signals received and converted to a first intermediate frequency by the outdoor unit and to provide demodulated outputs.

The exact configuration of the unit depends on the overall product design and the related transmission standards that the equipment is designed to receive. In the description of the measurement methods, it is assumed that the arrangement of the units is similar to the notional block diagrams shown in figure 1. Examples are given of units for the MAC systems and the digital sub-carrier/NTSC system.

A decoder for the baseband signals may be incorporated in the unit or attached to it as a separate unit. In the latter case, it is assumed that the tuner unit has the following interfaces to the decoder:

- a) MAC systems:
 - output for MAC composite video and data signal
 - output for MAC data signal (optional).
- b) Digital sub-carrier/NTSC system:
 - output for NTSC video signal
 - output for digital sound/data signal.

1.3.2 First intermediate frequency (first i.f.)

The first intermediate frequency produced by the outdoor unit is usually in the band of 1 GHz to 2 GHz.