



SLOVENSKI STANDARD

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Methods of measurement for broadcast video tape recorders -- Part 3: Electrical measurements for analogue component video signals (IEC 61237-3:1995)

Methods of measurement for broadcast video tape recorders -- Part 3: Electrical measurements for analogue component video signals

Meßverfahren für Videobandgeräte für den Rundfunk -- Teil 3: Elektrische Messungen für Videosignale mit analogen Komponenten

Méthodes de mesure pour les magnétoscopes de radiodiffusion -- Partie 3: Mesures électriques pour les signaux vidéo analogiques à composantes

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Ta slovenski standard je istoveten z: EN 61237-3:1995

ICS:

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English version

Methods of measurement for broadcast video tape recorders
Part 3: Electrical measurements for analogue component video signals
(IEC 1237-3:1995)

Méthodes de mesure pour les
magnétoscopes de radiodiffusion
Partie 3: Mesures électriques pour les
signaux vidéo analogiques à
composantes
(CEI 1237-3:1995)

Meßverfahren für Videobandgeräte für
den Rundfunk
Teil 3: Elektrische Messungen für
Videosignale mit analogen Komponenten
(IEC 1237-3:1995)

This European Standard was approved by CENELEC on 1994-03-08. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 60B(CO)160 + 160A, future edition 1 of IEC 1237-3, prepared by SC 60B, Video recording, of IEC TC 60, Recording, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61237-3 on 1994-03-08.

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) 1996-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-02-01

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

Endorsement notice

The text of the International Standard IEC 1237-3:1995 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
698	1981	Measuring methods for television tape machines	HD 439 S1	1983
961	1989*	Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type L	-	-
1105	1991	Reference tapes for video tape recorder systems	EN 61105	1993

Other publications:

- ITU-R Recommendation 471-1:1990 - Nomenclature and description of colour bar signals (Vol. XI-1)
- ITU-R Recommendation 567-3:1990 - Transmission performance of television circuits designed for use in international connections (Vol. XII)
- ITU-R Recommendation 601-2:1990 - Encoding parameters of digital television for studios (Vol. XI-1)
- ITU-R Recommendation 656:1986 - Interfaces for digital component video signals in 525-line and 625-line television systems (Vol. XI-1)

* IEC 961:1993 is harmonized as EN 60961:1994

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
1237-3

Première édition
First edition
1995-02

**Méthodes de mesure pour les magnétoscopes
de radiodiffusion**

Partie 3:

Mesures électriques pour les signaux vidéo
analogiques à composantes

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**Methods of measurement for broadcast
video tape recorders**

Part 3:

Electrical measurements for analogue
component video signals

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

METHODS OF MEASUREMENT FOR BROADCAST
VIDEO TAPE RECORDERS -

**Part 3: Electrical measurements for analogue
component video signals**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) 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.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

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International Standard IEC 1237-3 has been prepared by sub-committee 60B: Video recording, of IEC technical committee 60: Recording.

The former IEC 698: Measuring methods for television tape machines, will not be withdrawn because it contains the two transverse track video recorders (IEC 347), which will not be included in the new draft. IEC 698 is valid for mechanical measurements on transverse track video recorders only.

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

DIS	Report on voting
60B(CO)160 60B(CO)160A	60B(CO)172

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

IEC 1237 consists of the following parts, under the general title *Methods of measurement for broadcast video tape recorders*:

Part 1: Mechanical measurements

Part 2: Electrical measurements of analogue composite video signals

Part 3: Electrical measurements of analogue component video signals

Part 4: Measurements of audio performance

Part 5: Electrical measurements of digital composite video signals and digital audio signals

Part 6: Electrical measurements of digital component video signals and digital audio signals

Annex A is for information only.

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METHODS OF MEASUREMENT FOR BROADCAST VIDEO TAPE RECORDERS –

Part 3: Electrical measurements for analogue component video signals

1 Scope and object

This part of IEC 1237 describes the test signals and measurement methods for equipment mainly dedicated to record/playback of analogue component TV signals on magnetic tape on reels or in cassettes. It may also be applied for measuring methods for general use in television production and transmission. The allowable tolerances for the rated values for acceptable performance are not given in this standard, but may be derived from appropriate system specifications, manufacturers' specifications, etc.

The necessary reference and calibration tapes are either mentioned in the specific IEC Publication of the equipment under test or included in IEC 1105 (reference tapes) and IEC technical report 1295 (calibration tapes) [1]*.

The methods are applicable to acceptance tests, performance comparisons and, as far as possible, to routine checks.

The principal object of this document is to describe the methods of measurement, test signals and procedures which may apply to characteristics of video recording/playback machines mainly intended for professional use. The measuring methods described hereafter do not directly concern home equipment and it would appear that some will be difficult to apply to them.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1237. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of IEC 1237 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 698: 1981, *Measuring methods for television tape machines*

IEC 961: 1989, *Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type L*

* Figures in square brackets refer to annex A, Bibliography.

IEC 1105: 1991, *Reference tapes for video tape recorder systems*

ITU-R Recommendation 471-1: 1990, *Nomenclature and description of colour bar signals* (Vol. XI-1)

ITU-R Recommendation 567-3: 1990, *Transmission performance of television circuits designed for use in international connections* (Vol. XII)

ITU-R Recommendation 601-2: 1990, *Encoding parameters of digital television for studios* (Vol. XI-1)

ITU-R Recommendation 656: 1986, *Interfaces for digital component video signals in 525-line and 625-line television systems* (Vol. XI-1)

3 General

To ensure that the results obtained at a specific time at a specific place are comparable to other measurements, it is advisable to specify the test signals, measuring devices and types of tapes used together with results obtained.

Since measurements of television tape machines on the basis of a single test-line per field may not be fully representative of the full-field performance (see 5.1 and 5.2), they may give results which differ from those obtained or calculated with full-field test signals.

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Therefore it is necessary to additionally specify the measuring method:

- single line measurement (line number);
- block measurement (start-line, step-by-step line(s), number of steps);
- full-field measurement.

Additionally, it should be stated if the selection of lines coincides with a single record/playback head only.

4 Test conditions

If not otherwise stated all measurements shall be carried out at the following atmospheric conditions:

Temperature	(20 ± 1) °C
Relative humidity	(50 ± 2) %
Air pressure	86 kPa to 106 kPa
Conditioning before testing	24 h