

# INTERNATIONAL STANDARD

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## Methods of measurement for consumer-use digital VTRs – Electronic and mechanical performances

*Méthodes de mesure pour les magnétoscopes  
numériques destinés au grand public –  
Performances électroniques et mécaniques*

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## CONTENTS

|   |    |
|---|----|
| FOREWORD.....   | 7  |
| 1 Scope and object.....   | 8  |
| 2 Normative references.....                                       | 8  |
| 3 Terms and definitions .....                                     | 9  |
| 4 Measuring conditions .....                                      | 10 |
| 4.1 General .....   | 10 |
| 4.2 Environmental conditions .....                                | 10 |
| 4.3 Power supply.....   | 10 |
| 4.4 Test signal.....  | 10 |
| 4.4.1 Video test signal .....                                     | 10 |
| 4.4.2 Colour bar signal .....                                     | 11 |
| 4.4.3 Video input signal for measuring audio characteristics..... | 11 |
| 4.5 Measuring instruments.....                                    | 11 |
| 4.5.1 Noise meter .....   | 11 |
| 4.5.2 Audio signal generator .....                                | 11 |
| 4.5.3 Audio level meter .....                                     | 11 |
| 4.5.4 Audio mixed frequency oscillator.....                       | 12 |
| 4.5.5 Audio harmonic distortion meter.....                        | 12 |
| 4.6 Video test tape .....   | 12 |
| 5 Methods of measurement for mechanical characteristics.....      | 12 |
| 5.1 General .....   | 12 |
| 5.2 Tape speed .....  | 12 |
| 5.2.1 Test signal.....  | 12 |
| 5.2.2 Measurement.....  | 12 |
| 5.2.3 Presentation of the results .....                           | 13 |
| 5.3 Flatness of the RF envelope .....                             | 13 |
| 5.3.1 Test signal.....  | 13 |
| 5.3.2 Block diagram.....  | 13 |
| 5.3.3 Measurement.....  | 13 |
| 5.3.4 Presentation of the result .....                            | 14 |
| 5.4 Linearity .....   | 14 |
| 5.4.1 Test signal.....  | 14 |
| 5.4.2 Measurement.....  | 14 |
| 5.4.3 Presentation of the results .....                           | 15 |
| 5.5 Effective area starting position.....                         | 15 |
| 5.5.1 Test signal.....  | 15 |
| 5.5.2 Measurement.....  | 15 |
| 5.5.3 Presentation of the results .....                           | 15 |
| 5.6 Track displacement measurement by image processing .....      | 15 |
| 5.6.1 Measurement system.....                                     | 15 |
| 5.6.2 Image processing technique.....                             | 15 |
| 5.6.3 Measuring results .....                                     | 16 |

|        |  |    |
|--------|--|----|
| 6      | Video characteristics (analogue input/output)                                    | 17 |
| 6.1    | General  | 17 |
| 6.2    | Luminance amplitude frequency response   | 17 |
| 6.2.1  | Test signal  | 17 |
| 6.2.2  | Block diagram  | 17 |
| 6.2.3  | Measurement  | 17 |
| 6.2.4  | Presentation of results  | 18 |
| 6.3    | Chrominance amplitude frequency response   | 18 |
| 6.3.1  | Test signal  | 18 |
| 6.3.2  | Block diagram  | 18 |
| 6.3.3  | Measurement  | 18 |
| 6.3.4  | Presentation of results  | 18 |
| 6.4    | Luminance diagonal resolution  | 19 |
| 6.5    | Luminance frequency characteristics of diagonal resolution (i)                   | 19 |
| 6.6    | Luminance frequency characteristics of diagonal resolution (ii)                  | 19 |
| 6.7    | Luminance non-linear distortion  | 19 |
| 6.8    | Luminance waveform distortion (linear distortion)                                | 19 |
| 6.9    | Chrominance waveform distortion  | 19 |
| 6.9.1  | Test signal  | 19 |
| 6.9.2  | Block diagram  | 19 |
| 6.9.3  | Measurement  | 19 |
| 6.9.4  | Presentation of results  | 20 |
| 6.10   | Luminance vertical waveform distortion   | 20 |
| 6.11   | Chrominance vertical waveform distortion   | 20 |
| 6.12   | Automatic Gain Control (AGC) operation   | 20 |
| 6.13   | Chrominance to luminance horizontal displacement                                 | 20 |
| 6.14   | Chrominance to luminance vertical displacement                                   | 20 |
| 6.15   | Luminance signal-to-noise ratio  | 20 |
| 6.15.1 | General  | 20 |
| 6.15.2 | Test signal  | 21 |
| 6.15.3 | Block diagram  | 21 |
| 6.15.4 | Measurement  | 21 |
| 6.15.5 | Presentation of the results  | 22 |
| 6.16   | Chrominance signal-to-noise ratio  | 22 |
| 6.16.1 | General  | 22 |
| 6.16.2 | Test signal  | 22 |
| 6.16.3 | Block diagram  | 22 |
| 6.16.4 | Measurement  | 23 |
| 6.16.5 | Presentation of the results  | 23 |
| 7      | Composite signal decoding characteristics (luminance and chrominance separation) | 24 |
| 7.1    | Luminance signal separation (general)  | 24 |
| 7.2    | Luminance signal separation at colour change points                              | 24 |
| 7.3    | Chrominance signal separation  | 24 |
| 7.4    | Chrominance signal separation with three dimensional processing                  | 24 |
| 7.4.1  | Test signal  | 24 |
| 7.4.2  | Block diagram  | 24 |
| 7.4.3  | Measurement  | 24 |
| 7.4.4  | Presentation of results  | 25 |

|        |   |    |
|--------|---|----|
| 7.5    | Luminance signal separation with three dimensional signal processing..... | 25 |
| 7.5.1  | Test signal.....  | 25 |
| 7.5.2  | Block diagram.....  | 25 |
| 7.5.3  | Measurement.....  | 25 |
| 7.5.4  | Presentation of results .....   | 25 |
| 8      | Audio characteristics (analogue input/output) .....                       | 25 |
| 8.1    | General .....   | 25 |
| 8.2    | Audio operational output voltage (with AGC) .....                         | 26 |
| 8.2.1  | Test signal.....  | 26 |
| 8.2.2  | Block diagram.....  | 26 |
| 8.2.3  | Measurement.....  | 26 |
| 8.2.4  | Presentation of results .....   | 26 |
| 8.3    | Audio operational input voltage (without AGC).....                        | 26 |
| 8.3.1  | Test signal.....  | 26 |
| 8.3.2  | Block diagram.....  | 26 |
| 8.3.3  | Measurement.....  | 26 |
| 8.3.4  | Presentation of results .....   | 26 |
| 8.4    | Audio maximum output voltage .....  | 26 |
| 8.4.1  | Test signal.....  | 26 |
| 8.4.2  | Block diagram.....  | 27 |
| 8.4.3  | Measurement.....  | 27 |
| 8.4.4  | Presentation of results .....   | 27 |
| 8.5    | Amplitude frequency response .....  | 27 |
| 8.5.1  | Test signal.....  | 27 |
| 8.5.2  | Measurement.....  | 27 |
| 8.6    | Phase difference between channels .....                                   | 27 |
| 8.6.1  | Test signal.....  | 27 |
| 8.6.2  | Measurement.....  | 27 |
| 8.6.3  | Presentation of results .....   | 27 |
| 8.7    | Signal-to-noise ratio.....  | 27 |
| 8.8    | Dynamic range .....   | 27 |
| 8.8.1  | Test signal.....  | 27 |
| 8.8.2  | Measurement.....  | 28 |
| 8.8.3  | Presentation of results .....   | 28 |
| 8.9    | Harmonic distortion.....  | 28 |
| 8.10   | Inter-modulation distortion .....   | 28 |
| 8.10.1 | Test signal.....  | 28 |
| 8.10.2 | Measurement.....  | 28 |
| 8.10.3 | Presentation of result.....   | 28 |
| 8.11   | Channel separation.....   | 28 |
| 8.11.1 | Test signals .....  | 28 |
| 8.11.2 | Measurement.....  | 28 |
| 8.11.3 | Presentation of results .....   | 28 |
| 8.12   | Wow-flutter.....  | 29 |
| 8.13   | Pitch difference between record and playback.....                         | 29 |
| 8.13.1 | Test signal.....  | 29 |
| 8.13.2 | Measurement.....  | 29 |
| 8.13.3 | Presentation of results .....   | 29 |
| 9      | Classification of the characteristics to be specified.....                | 29 |

|   |        |
|---|--------|
| Annex A (informative) Error rate .....  | 44     |
| A.1 Definition .....  | 44     |
| A.2 Block diagram .....   | 44     |
| A.3 Measurement .....   | 44     |
| A.4 Presentation of the results .....   | 45     |
| A.5 Example 1 .....   | 45     |
| A.6 Example 2 .....   | 45     |
| <br>Bibliography .....  | <br>47 |
| <br>Figure 1 – Basic block diagram of measurement system .....                      | <br>30 |
| Figure 2 – Measuring method for track interval .....                                | 30     |
| Figure 3 – Measuring block diagram for RF envelope flatness .....                   | 31     |
| Figure 4 – Measuring method for RF envelope flatness .....                          | 31     |
| Figure 5 – Cross-tape track height for DV format .....                              | 31     |
| Figure 6 – Cross-tape track height for D-VHS format .....                           | 32     |
| Figure 7 – Measuring method for linearity .....                                     | 32     |
| Figure 8 – Measuring method for the starting position .....                         | 32     |
| Figure 9 – Block diagram of the measurement system .....                            | 33     |
| Figure 10 – Schematic diagram of the image processing technique .....               | 34     |
| Figure 11 – Illustration of track displacement distribution (model) .....           | 35     |
| Figure 12 – Example of calculation results .....                                    | 35     |
| Figure 13 – Test signal for luminance amplitude frequency response .....            | 36     |
| Figure 14 – Measuring block diagram for composite video signal .....                | 36     |
| Figure 15 – Measuring block diagram for S video signal .....                        | 36     |
| Figure 16 – Test signal for chrominance amplitude frequency response .....          | 37     |
| Figure 17 – Test signal for luminance non-linear distortion .....                   | 37     |
| Figure 18 – Test signal for luminance waveform distortion .....                     | 37     |
| Figure 19 – Test signal for chrominance waveform distortion .....                   | 38     |
| Figure 20 – Measuring method for chrominance waveform distortion .....              | 38     |
| Figure 21 – Composite video test signal for luminance signal-to-noise ratio .....   | 39     |
| Figure 22 – S luminance test signal for luminance signal-to-noise ratio .....       | 39     |
| Figure 23 – S chrominance test signal for luminance signal-to-noise ratio .....     | 39     |
| Figure 24 – Block diagram for composite video input .....                           | 39     |
| Figure 25 – Block diagram for S video input .....                                   | 40     |
| Figure 26 – Composite video test signal for chrominance signal-to-noise ratio ..... | 40     |
| Figure 27 – S luminance test signal for chrominance signal-to-noise ratio .....     | 40     |
| Figure 28 – S chrominance test signal for chrominance signal-to-noise ratio .....   | 41     |
| Figure 29 – Test signal for 3D chrominance signal separation .....                  | 41     |
| Figure 30 – Measuring block diagram for chrominance signal separation .....         | 41     |
| Figure 31 – Measuring method for 3D chrominance signal separation .....             | 42     |
| Figure 32 – Test signal for 3D luminance signal separation .....                    | 42     |
| Figure 33 – Measuring block diagram for luminance signal separation .....           | 42     |

|   |    |
|---|----|
| Figure 34 – Measuring method for 3D luminance signal separation .....         | 43 |
| Figure 35 – Block diagram for audio characteristics .....                     | 43 |
| Figure A 1 – Structure of Data-synchronisation blocks .....                   | 46 |
| Figure A 2 – Structure of DV format data-synchronisation blocks .....         | 46 |
| Figure A 3 – Structure of D-VHS format data-synchronisation blocks .....      | 46 |
| Table 1 – Setting of the colour noise meter for luminance measurement .....   | 21 |
| Table 2 – Example: white level of test signal (8 bit system) .....            | 22 |
| Table 3 – Setting of the colour noise meter for chrominance measurement ..... | 23 |
| Table 4– Example: Chrominance level of test signal (8 bit system) .....       | 23 |
| Table 5 – Classification of the characteristics to be specified .....         | 29 |

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**METHODS OF MEASUREMENT FOR CONSUMER-USE DIGITAL VTRs –  
ELECTRONIC AND MECHANICAL PERFORMANCES**
**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 co-operation 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.
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International Standard IEC 62122 has been prepared by TA 7: Moderate data rate storage media and equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

| FDIS         | Report on voting |
|--------------|------------------|
| 100/452/FDIS | 100/480/RVD      |

Full information on the voting for the approval of this standard 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.

Annex A is for information only.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

## METHODS OF MEASUREMENT FOR CONSUMER-USE DIGITAL VTRs – ELECTRONIC AND MECHANICAL PERFORMANCES

### 1 Scope and object

This standard specifies the basic methods of measurement for evaluating the electronic and mechanical performances of consumer-use digital VTRs.

The formats of open reel VTRs, Beta, VHS, and 8 mm VTRs have been standardized. Methods of measurement for these analogue VTRs have been standardized in IEC 61041-1, IEC 61041-2, IEC 61041-3, IEC 61041-4, IEC 61041-5, and IEC 61146-3. Digital VTR 6,35 mm DV format and 12,65 mm D-VHS format have now been brought on the market. The methods of measurement for these consumer-use digital VTRs should be specified and standardized.

With these measurement techniques, some items for the evaluation of performances specific to digital VTRs have also been included.

There are two objectives for the proposed methods of measurement. One is to check the interchangeability and characteristics of the equipment under test which are indispensable to manufacturers, and the other is to evaluate the quality of image and sound, which concerns the customer. The latter is a priority for consumer satisfaction.

Since a consumer can use only general-purpose instruments, any test which needs dismantling of apparatus and requires special instruments is in principle not specified. As error rate is important for digital equipment, an example of a method for measuring error rate is given in annex A.

### 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.

IEC 60094-3:1979, *Magnetic tape sound recording and reproducing systems – Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape*

IEC 60386:1972, *Method of measurement of speed fluctuations in sound recording and reproducing equipment*

IEC 60883:1987, *Measuring method for chrominance signal-to-random noise ratio for video tape recorders*

IEC 61041-1:1990, *Non-broadcast video tape recorders – Methods of measurement – Part 1: General, video (NTSC/PAL) and audio (longitudinal) characteristics*

IEC 61041-5:1997, *Non-broadcast video tape recorders – Methods of measurement – Part 5: High-band video tape recorders including those equipped with Y/C video connectors (NTSC/PAL)*

IEC 61834 (all parts), *Recording – Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems)*

ITU-R BT.471-1:1986, *Nomenclature and description of colour bar signals*

ITU-R BT.500-10:2000, *Methodology for the subjective assessment of the quality of television pictures*

ITU-R BT.1204:1995, *Measuring methods for digital video equipment with analogue input/output*