# SLOVENSKI STANDARD
# SIST EN 60712:1999/A1:1999

**01-april-1999**

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**Helical-scan video-tape cassette system using 19 mm (3/4 in) magnetic tape, known as U-format - Amendment A1 (IEC 60712:1993/A1:1993)**

Helical-scan video-tape cassette system using 19 mm (3/4 in) magnetic tape, known as U-format

Video-Bandkassettensystem mit Schrägspuraufzeichnung auf Magnetband 19 mm, bekannt m-als U-Format



Système à cassette à bande vidéo à balayage hélicoïdal utilisant la bande magnétique de 19 mm (3/4 in), d'appellation format-U



**Ta slovenski standard je istoveten z:** **EN 60712:1994/A1:1994**

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**ICS:**

| | | |
|---|---|---|
| 33.160.40 | Video sistemi | Video systems |

**SIST EN 60712:1999/A1:1999** **en**

EUROPEAN STANDARD

NORME EUROPEENNE

EUROPÄISCHE NORM

EN 60712/A1

September 1994

ICS 33.160.40

Descriptors: Magnetic video recording, helical scanning, television recording and replay, cassettes, dimensions, requirements, properties

Amendment A1 to the English version of EN 60712

# Helical-scan video-tape cassette system using 19 mm (3/4 in) magnetic tape, known as U-format (IEC 712:1993/A1:1993)

Système à cassette à bande vidéo à balayage hélicoïdal utilisant la bande magnétique de 19 mm (3/4 in), d'appellation format-U (CEI 712:1993/A1:1993)

Video-Bandkassettensystem mit Schrägspuraufzeichnung auf Magnetband 19 mm, bekannt als U-Format (IEC 712:1993/A1:1993)



This amendment A1 modifies the European Standard EN 60712:1994. It was approved by CENELEC on 1994-07-05. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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



Ref. No. EN 60712:1994/A1:1994 E

## FOREWORD

The CENELEC questionnaire procedure, performed for finding out whether or not amendment 1:1993 to the International Standard IEC 712:1993 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as amendment A1 to EN 60712 on 5 July 1994.

The following dates were fixed:

| | | |
|---|---|---|
| - latest date of publication of an identical national standard | (dop) | 1995-07-15 |
| - latest date of withdrawal of conflicting national standards | (dow) | 1995-07-15 |

## ENDORSEMENT NOTICE



The text of amendment 1:1993 to the International Standard IEC 712:1993 was approved by CENELEC as an amendment to the European Standard without any modification.

# NORME INTERNATIONALE
# INTERNATIONAL STANDARD

**CEI**
**IEC**
**712**

1993

AMENDEMENT 1
AMENDMENT 1

1993-06

Amendement 1

## Système à cassette à bande vidéo à balayage hélicoïdal utilisant la bande magnétique de 19 mm (¾ in), d'appellation format-U



Amendment 1



## Helical-scan video-tape cassette system using 19 mm (¾ in) magnetic tape, known as U-format



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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE N

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*For price, see current catalogue*

FOREWORD

This amendment has been prepared by sub-committee 60B: Video recording, of IEC technical committee 60: Recording.

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

| DIS | Report on Voting |
|---|---|
| 60B(CO)122 | 60B(CO)132 |

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

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Page 11

INTRODUCTION

*Replace the last sentence by the following:*



The mechanical and electrical specifications for the U-matic H-format and SP-format are contained in this standard.



Page 13

**1 Scope and object**

*Add the following at the end of the first paragraph:*

It contains the definition of parameters for the two-head helical-scan video recording playback system, using 19 mm (3/4 in) tape cassettes, known as U-matic SP-format (figures 2b and 2c). The system is suitable for 625/50 PAL and 525/60 NTSC colour television systems.

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*Add the following new subclauses:*

3.3 *Reference tape (SP-format)*

Blank tape to be used for reference recordings may be purchased from the manufacturers listed in annex A. The electromagnetic compatibility parameters and their specifications should be specified by the manufacturers and controlled accordingly.

The *model name* is IEC U-matic SP-format reference tape.

Electromagnetic compatibility parameters and their specifications are indicated in annex A.

3.4 *Calibration tape*

The calibration tapes which satisfy the following requirements will be available for purchase from the manufacturers producing video tape recorders and players in accordance with this format specification.

3.4.1 *Record locations and dimensions*

For the calibration tapes to be used for the purpose of calibrating the mechanical accuracy of recorder or player in accordance with this format specification, 50 % reduction in the tolerance shown in table 2, page 63 of IEC 712, should be applied to them in principle. If necessary, the record locations and dimensions can be specially modified for some calibration tapes in order to avoid some calibration errors or to help some calibration work.

3.4.2 *Calibration signals*

Two classes of signals may be recorded on the calibration tapes:

a) A series of conventional test signals:

| Video | Audio | |
|---|---|---|
| – Colour bars (75 %) | – 1 kHz | 0 VU |
| – Gated sweep | – 10 kHz | –10 VU |
| – Pulse and bar | – 40 Hz | –20 VU |
| | – 1 kHz | –20 VU |
| | – 7 kHz | –20 VU |
| | – 10 kHz | –20 VU |
| | – 15 kHz | –20 VU |

b) Special test signals developed by each manufacturer for product alignment. These signals are not universally applicable too the products from all manufacturers and will not be specified.



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*Add the following new subclause:*

5.10 *Time-code head position for SP-format*

The distance on the tape from the beginning of the 180° scan of video head to the address head position shall be 48 mm ± 0,1 mm.

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*Add the following new subclause:*

11.3 *Coercivity (SP tape)*

The coercivity shall be approximately 56 x $10^3$ A/m ~ 64 x $10^3$ A/m (700 to 800 oersteds).

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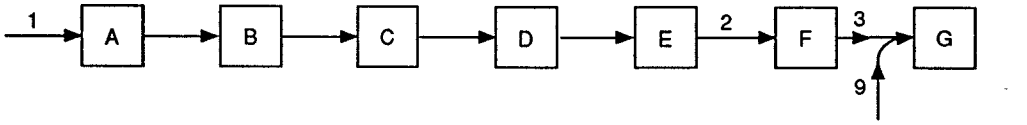
**12 Luminance channel**

*Add the following description of SP-format before subclause 12.1:*

*Luminance channel (SP-format)*




IEC 616/93

A Low-pass filter
B Non-linear pre-emphasis
C Pre-emphasis
D FM modulator
E FM high-pass filter
F Recording amplifier
G Video head

1 Input signal: composite video signal or composite colour signal
2 Band-limited FM luminance signal
3 Luminance recording current
9 Chrominance recording current



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12.2 *Recording current*

Subclause 12.2.1

*Add the following text before the note:*

For SP format the recording current shall be the optimum record current at frequencies shown in the table below over the entire FM carrier bandwidth.

| 625/50 | 525/60 |
|---|---|
| 6,1 MHz | 5,5 MHz |

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*Add the following new subclause:*

12.3.2 *Characteristic frequencies for SP-format*

The instantaneous frequencies corresponding to reference video levels shall be as indicated in the table below.

| | 625/50 | | 525/60 | |
|---|---|---|---|---|
| Reference video level | Instantaneous frequency | Tolerance | Instantaneous frequency | Tolerance |
| Sync tip | 5,6 MHz (nom.) | – | 5 MHz (nom.) | – |
| Peak white | 7,2 MHz | ±0,1 MHz | 6,6 MHz | ±0,1 MHz |

The frequency deviation shall be 1,6 MHz ± 0,1 MHz.

12.4 *Pre-emphasis*



*Add, before 12.4.1, the following sentence:*



This also applies to SP-format 525/60.



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Subclause 12.4.1

*Replace the first sentence by the following:*

For H-format and SP-format 625/50 the following values apply:

12.5 *Recording frequency bandwidth*

*Add the following new subclause:*

12.5.2 *Recording frequency bandwidth (SP-format)*

For composite colour signals: 30 Hz – 3,3 MHz (–3 dB).

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*Add the following new subclauses and tables:*