SLOVENSKI STANDARD
SIST EN 60933-3:1999

01-julij-1999

Audio, video and audiovisual systems - Interconnections and matching values - Part 3: Interface for the interconnection of ENG cameras and portable VTRs using non-composite signals, for 625 line/50 field systems (IEC 60933-3:1992)

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Audio-, Video- und audiovisuelle Anlagen - Verbindung und Anpassungswerte -- Teil 3: Schnittstelle für die Verbindung von EB-Kameras und tragbaren Videobandgeräten für Komponenten-Signale für 625-Zeilen/50-Halbbilder-Systeme

Systèmes audio, vidéo et audiovisuels - Interconnexions et valeurs d'adaptation -- Partie 3: Interface pour l'interconnexion de caméras pour le reportage électronique d'actualité et des magnétoscopes portatifs, utilisant des signaux non composites, pour les systèmes 625 lignes/50 trames

Ta slovenski standard je istoveten z: **EN 60933-3:1992**

ICS:

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33.160.40	Video sistemi	Video systems

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Descriptors: Video recording, radiocommunications, recording apparatus, motion-picture cameras, video recorders, appliance interconnections, interfaces, connectors, characteristics

ENGLISH VERSION

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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 84(CO)134, as prepared by IEC Technical Committee N° 84: Equipment and systems in the field of audio, video and audiovisual engineering, was submitted to the IEC-CENELEC parallel vote in September 1991.

The reference document was approved by CENELEC as EN 60933-3 on 16 June 1992.

The following dates were fixed:

- latest date of publication of an identical national standard	(dop)	1993-08-01
- latest date of withdrawal of conflicting national standards	(dow)	1993-08-01

For products which have complied with the relevant national standard before 1993-08-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-08-01.

ENDORSEMENT NOTICE

The text of the International Standard IEC 933-3:1992 was approved by CENELEC as a European Standard without any modification.

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Part 3:
Interface for the interconnection of ENG cameras and portable VTRs using non-composite signals, for 625 line/50 field systems

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Part 3: Interface for the interconnection of ENG cameras and portable VTRs using non-composite signals, for 625 line/50 field systems

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.

This part of International Standard IEC 933 has been prepared by IEC Technical Committee No. 84: Equipment and systems in the field of audio, video and audiovisual engineering.

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

DIS	Report on Voting
84(CO)134	84(CO)147

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

Annex A is for information only.

This part is based on EBU* Recommendation R34.

* European Broadcasting Union – Geneva (Switzerland).

AUDIO, VIDEO AND AUDIOVISUAL SYSTEMS – INTERCONNECTIONS AND MATCHING VALUES

Part 3: Interface for the interconnection of ENG cameras and portable VTRs using non-composite signals, for 625 line/50 field systems

1 Scope

This part of IEC 933 defines an interface which is designed to enable the Electronic News Gathering (ENG) signals produced in a non-composite form to be sent through a parallel link between a camera and a portable Video Tape Recorder (VTR) which are separated by about 5 m to 10 m instead of being combined in a camera-recorder.

This part of IEC 933 includes the electrical characteristics that the interface will have to satisfy in order to transmit the programme signals produced by the camera (audio and video components) and those fed back to the viewfinder (video, playback), as well as the operational controls and the monitoring indications. This specification includes only those characteristics considered to be essential to facilitate the interconnection of equipment produced by different manufacturers. In order to prevent damage due to incorrect connections, it is necessary to make sure that the equipment concerned complies with this specification, and, furthermore, that the additional connections provided by the manufacturers in the case of particular systems are not incompatible with this specification.

One system has been recommended by the EBU for the recording of non-composite ENG signals (Recommendation R32). The detailed specification of the interface for this system is reproduced in annex A and the correspondence between the contacts in that case and the signals taken into account by the EBU is indicated.

Signals not specified in this standard (e.g. other audio inputs to the VTR or reference video signals for locking the sync. pulse generator of the camera) should be connected by means of special sockets on the camera or VTR. They are not covered by this specification, and neither is the composite video interface that may be found on equipment of this type.

The merit of this interface does not depend on the use of one particular type of connector. It is sufficient for compatibility that the electrical matching values given in clause 3 are observed. Manufacturers should provide full details of the connectors used on their equipment and the contact assignments. Attention is drawn to EBU Technical Standard N10 which specifies an interface of four BNC connectors, with the female part mounted on VTRs and other equipment.

Nevertheless, it is recommended that in new designs, the 26-contact connector and contact assignments described in annex A be used. Each connector on equipment should be fitted only with the contacts which are actually used so that inadvertent connection of signals not provided for in the equipment is prevented. Cord sets should connect all contacts.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of International Standard IEC 933. 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 International Standard IEC 933 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.

CCIR Report 624-4: 1990, *Characteristics of television systems.*

CCIR Report 629-4: 1990, *Digital coding of colour television signals.*

EBU Technical Standard N10: 1989, *Parallel interface for analogue component video signals.*

EBU Recommendation R32: 1984, *Analogue component recording equipment for ENG applications.*

3 Electrical characteristics of the interface

3.1 *Programme signals*

In practice, component video signals are generally designated by the letters Y, R-Y and B-Y, but in the following, the notation adopted by the CCIR has been used: E'_Y, E'_{CR} and E'_{CB}.

Luminance signal (camera to VTR)

The luminance signal is the same as that defined in CCIR Report 624-4. In accordance with table II of that report, it is obtained from the primary signals by means of the equation:

$$E'_Y = 0{,}299\ E'_R + 0{,}587\ E'_G + 0{,}114\ E'_B$$

where E'_R, E'_G and E'_B are the primary signals after gamma precorrection. In the present application, the amplitude range of the primary signals is 0,700 V.

The luminance signal should include synchronizing pulses and line and field blanking in accordance with CCIR Report 624-4 (tables I, I.1 and I.2).

The amplitude of this signal should comply with the following specifications:

- peak-to-peak amplitude (including sync.) : 1 V;
- nominal value of the d.c. component: 0 V at blanking level, or a.c. coupled output;
- input and output impedance: $Z_o = Z_i = 75\ \Omega$.