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Professional video storage equipment – Guideline of time code transmission

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PROFESSIONAL VIDEO STORAGE EQUIPMENT – GUIDELINE OF TIME CODE TRANSMISSION

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62644, which is a technical specification, has been prepared by technical area 6: Storage media, data structures, equipment and systems, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
100/1968/DTS	100/2022/RVC

Full information on the voting for the approval of this technical specification 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.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- transformed into an International Standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

Time and control code is standardized in IEC 60461 and SMPTE ST 12-1:2008. Transmission of time code is standardized in SMPTE ST 12-2:2008.

Reference signal is often used for professional video storage in order to synchronize all equipment in a system. However there are no clear specifications for the transmission of time code under such system operation in these standards. When the system treats progressive video whose frame rate is 50 Hz or 59,94 Hz and when it uses reference signal, time code transmission of equipment may be treated differently and the interoperability may not be maintained.

Therefore, clear guidelines of time code transmission for professional video storage in such a system operation are expected.

PROFESSIONAL VIDEO STORAGE EQUIPMENT – GUIDELINE OF TIME CODE TRANSMISSION

1 Scope

This Technical Specification specifies the relationship between the reference signal and Ancillary Time Code (ATC) for use in professional storage equipment operating at 50 frames-per-second or 59,94 frames-per-second and handling progressive video signal under the system operation to maintain the frame pair which is composed of two frames.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

SMPTE ST 12-1:2008, *Television – Time and Control Code*

SMPTE ST 12-2:2008, *Television – Transmission of Time Code in the Ancillary Data Space*

SMPTE ST 318:1999, *Television and Audio – Synchronization of 59.94 – or 50-Hz Related Video and Audio Systems in Analog and Digital Areas – Reference Signals*

SMPTE ST 274:2008, *Television – 1 920 × 1 080 Image Sample Structure, Digital Representation and Digital Timing Reference Sequences for Multiple Picture Rates*