INTERNATIONAL STANDARD

IEC 60774-4

First edition
2002-07

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS –

Part 4: S-VHS video cassette system – ET-mode

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HELICAL-SCAN VIDEO TAPE CASSETTE SYSTEM USING 12,65 mm (0,5 in) MAGNETIC TAPE ON TYPE VHS –

Part 4: S-VHS video cassette system – ET mode

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International Standard IEC 60774-4 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:

CDV	Report on voting
100/433/CDV	100/498/RVC

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 3.

IEC 60774 consists of several parts under the general title *Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS*:

Part 1: VHS and compact VHS cassette system

Part 2: FM audio recording

Part 3: S-VHS

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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- withdrawn;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

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

HELICAL-SCAN VIDEO TAPE CASSETTE SYSTEM USING 12,65 mm (0,5 in) MAGNETIC TAPE ON TYPE VHS –

Part 4: S-VHS video cassette system – ET mode

1 Scope

This part of IEC 60774 is applicable to the S-VHS ET mode which records in S-VHS signal format on a VHS cassette. In this mode, several video signal system recording parameters are switched so that the signal characteristics recorded on the VHS tape are equivalent to S-VHS recording on S-VHS tape.

Cassettes recorded in the S-VHS ET mode can be played with the S-VHS-based playback system and the VHS equivalent that includes the SQPB function.

This standard indicates the differences from IEC 60774-3 which covers only S-VHS.

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 60774-3:1993, *Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS – Part 3: S-VHS*

3 Terms and definitions

For the purposes of this document, the terms indicated in IEC 60774-3, as well as the following, apply.

S-VHS quasi-playback
SQPB
function to enable the playback of S-VHS tape with a VHS machine

4 Applicable video cassette recorder

The S-VHS ET mode is applicable for 525 line-60 field and 625 line-50 field signal recording.

A video cassette recorder comprising this recording system shall contain a recording system complying with both the VHS video cassette system standard and the S-VHS video cassette system standard. The recording system relates to the SP and EP modes for 525 line-60 field and the SP mode only for 625 line-50 field signal recording.

5 Applicable video cassette

The recording system applies to video cassettes in compliance with VHS cassette and VHS-C cassettes. Recordings in the S-VHS ET mode are not to be made using S-VHS cassettes.

6 Video signal recording

Refer to IEC 60774-3.

6.1 Main pre-emphasis characteristics

The main pre-emphasis response is compensated by the following filter:

525 line-60 field signals: see table 1, figure 1 and figure 2;

625 line-50 field signals: see table 2, figure 3 and figure 4.

Table 1 – Compensation filter response for 525 line-60 field signals

Frequency MHz	Response dB
1,0	–0,2 ± 0,3
2,0	–0,8 ± 0,3
3,0	–1,6 ± 0,3
4,0	–2,5 ± 0,3
5,0	–3,4 ± 0,3

Table 2 – Compensation filter response for 625 line-50 field signals

Frequency MHz	Response dB
1,0	–0,4 ± 0,3
2,0	–1,3 ± 0,3
3,0	–2,6 ± 0,3
4,0	–3,9 ± 0,3
5,0	–5,1 ± 0,3

6.2 Clipping level

White clipping level (from sync tip): 190 % ± 10 % (S-VHS specification; 210 % ± 10 %)

Dark clipping level (from sync tip): Unchanged (–70 % ± 10 %)

6.3 FM signal recording head current

For the FM carrier frequency band, the optimum recording current shall be set for the applicable video cassette tape.

The optimum recording current is defined as that required in order to obtain the maximum playback output.

6.4 Converted chrominance signal recording level

A red lustre signal input is recorded so that the playback level of (fy ± 2fc) frequency spurious component is –20 dB to –25 dB with respect to the fy playback level.

fy: Luminance signal centre frequency (6,5 MHz)

fc: Converted chrominance sub-carrier frequency

NOTE A red lustre signal should be referred to IEC 61041-1, 3.3 [1].

7 Cassette discrimination system

The S-VHS ET mode shall be selectable only when a cassette in compliance with the VHS standard is inserted.

Playback mode detection shall be functioned from the playback FM carrier frequency.

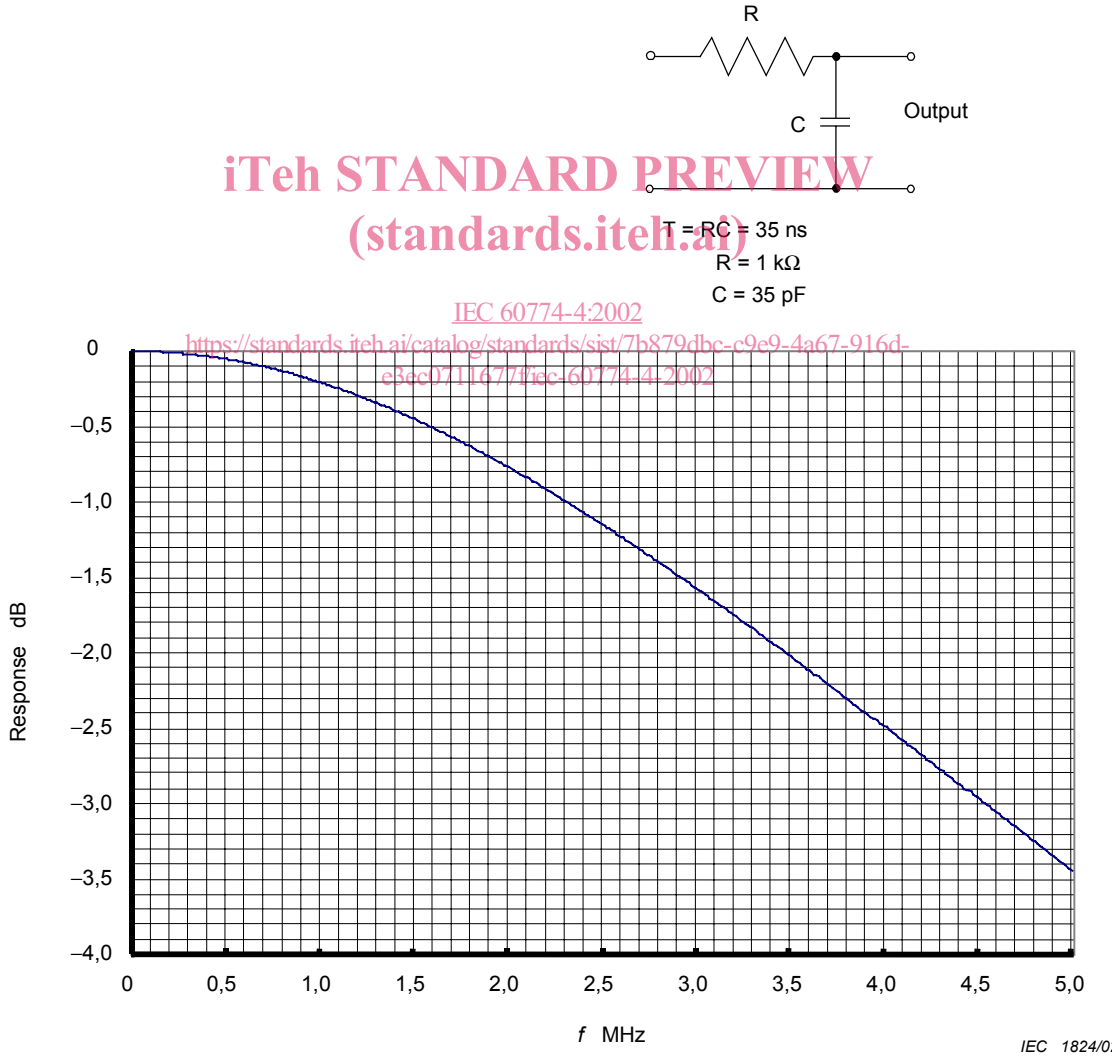

Figure 1 – Compensation filter response for 525 line-60 field signals

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