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# International Standard



# 1781

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## **Cinematography — Projector usage of 8 mm Type S motion-picture film for direct front projection**

*Cinématographie — Utilisation du film 8 mm type S, dans le projecteur pour la projection frontale directe*

Second edition — 1983-12-15

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[ISO 1781:1983](https://standards.itech.ai/catalog/standards/sist/ef2c18f6-05dd-4041-9ba0-22668a0d264d/iso-1781-1983)

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UDC 778.55

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**Descriptors:** cinematography, motion picture projectors, motion picture film, photographic images, position (location), orientation, camera speed.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1781 was developed by Technical Committee ISO/TC 36, *Cinematography*.

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This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 1781-1973), which had been approved by the member bodies of the following countries:

Austria	India	Switzerland
Belgium	Italy	Thailand
Canada	Netherlands	Turkey
Czechoslovakia	Romania	United Kingdom
Egypt, Arab Rep. of	South Africa, Rep. of	USA
France	Spain	USSR
Germany, F.R.	Sweden	

The member body of the following country had expressed disapproval of the document on technical grounds:

Japan

# Cinematography — Projector usage of 8 mm Type S motion-picture film for direct front projection

## 1 Scope and field of application

This International Standard specifies the emulsion orientation, the rate of projection and the position of the image area for 8 mm Type S motion-picture film as used for direct front projection.

## 2 Characteristics

The emulsion orientation of sound or silent release prints shall be toward the projection lens when the film is threaded for direct front projection, as shown in the figure.

### NOTES

1 This recommendation is feasible since an intermediate optical or contact step, necessary for quantity reproduction, can be arranged to produce prints with the recommended orientation. A common emulsion orientation facilitates intercutting among 8 mm Type S release prints and reversal original 8 mm Type S material.

2 It is recognized that some users will require contact reversal prints from original 8 mm Type S, particularly in the amateur field, but since these would not be intercut with commercial prints, picture focus should not be a problem. Reversal reduction prints can be made easily to comply with the recommended practice.

## 3 Position of image

The perforation used for the film transport claw shall be two perforations above the perforation adjacent to the projected aperture when the transport claw is at the bottom of its stroke (the -2 position).

## 4 Rate of projection

The usual rate of projection shall be 18 frames per second for silent use and 18 and 24 frames per second for sound use. (See the annex.)

### NOTES

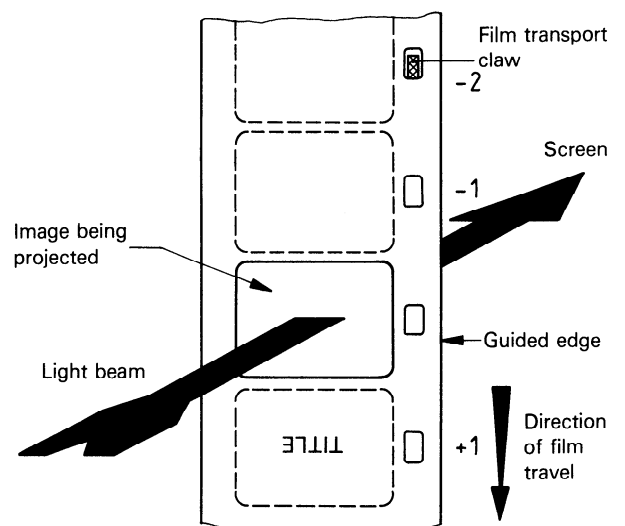
1 In silent projectors having a fixed rate of projection, the rate shall be 18 frames per second with a tolerance appropriate for its intended use. Silent projectors having manually adjustable speed shall be capable of reaching a projection rate of 18 frames per second.

2 It is recognized that under certain conditions, silent material originally photographed at 18 frames per second or at 24 frames per second may be projected at 24 frames per second.

## 5 Bibliography

ISO 1787, *Cinematography — Camera usage of 8 mm motion-picture film perforated Type S.*

ISO 3645, *Cinematography — Image area produced by 8 mm Type S motion-picture camera aperture and maximum projectable image area — Positions and dimensions.*



The film is shown as seen from the light source in the projector

Figure

## Annex

### Additional data

(This annex does not form part of the standard.)

#### A.1 Sound speed

The sound speed recommendation of 24 frames per second (see clause 4) is primarily intended for professional application of 8 mm Type S sound motion-picture photography.

#### A.2 Single-system sound

It is expected that the amateur, in using this system or in using post-processed magnetically striped film, may record his sound at 18 frames per second, as limited by the speed of his original photography or his desire to conserve film stock.

#### A.3 Image location

The specified location coincides with the vertical transport claw location required of 8 mm Type S camera original film and thereby improves steadiness through cancellation of any variation of the perforation pitch.

#### A.4 Maximum image

The dimensions of the image projected relative to engaged film positioning are specified in ISO 3645. It is customary to provide a framing movement of approximately 0,38 mm (0.015 in) above and below this position.

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#### A.5 Transport claw

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In specifying the film transport claw in clause 3, the existence of projectors which use other than the –2 perforation to position the film is recognized. Future design, however, is expected to comply with the specification in this International Standard.