
Cinematography — Multichannel analogue and digital photographic sound and control records on 35 mm motion-picture prints and negatives, and digital sound-control records on 70 mm motion-picture prints and negatives — Position and width dimensions

Cinématographie — Enregistrements des commandes et du son photographiques analogiques et numériques multicanaux sur copies et négatifs cinématographiques 35 mm, et enregistrements des commandes sonores numériques sur copies et négatifs cinématographiques 70 mm — Position et dimensions en largeur



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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17266 was prepared by Technical Committee ISO/TC 36, *Cinematography*.

Cinematography — Multichannel analogue and digital photographic sound and control records on 35 mm motion-picture prints and negatives, and digital sound-control records on 70 mm motion-picture prints and negatives — Position and width dimensions

1 Scope

This International Standard specifies the lateral, and vertical where applicable, positions and width dimensions of multichannel analogue and digital photographic sound records and control tracks on 35 mm and 70 mm motion-picture prints and negatives.

2 Positions and dimensions

2.1 The general positions of analogue, control and digital tracks for 35 mm motion-picture film are shown in Figure 1.

2.2 The positions and dimensions of the analogue area shall be as shown in Figure 2 and given in Table 1.

2.3 The positions and dimensions of the type I digital sound records for positive print film shall be as shown in Figure 3 and given in Table 2.

2.4 The positions and dimensions of the type I digital sound records for negative film shall be as shown in Figure 3 and given in Table 3.

2.5 The positions and dimensions of the type II digital sound records for positive print film shall be as shown in Figure 4 and given in Table 4.

2.6 The positions and dimensions of the type II digital sound records for negative film shall be as shown in Figure 4 and given in Table 5.

2.7 The positions and dimensions of the type III digital control track for positive print film shall be as shown in Figure 5 and given in Table 6.

2.8 The positions and dimensions of the type III digital control track for negative film shall be shown in Figure 5 and given in Table 7.

2.9 The positions and dimensions of the type III digital control track for 70 mm positive print film shall be as shown in Figure 6 and given in Table 8.

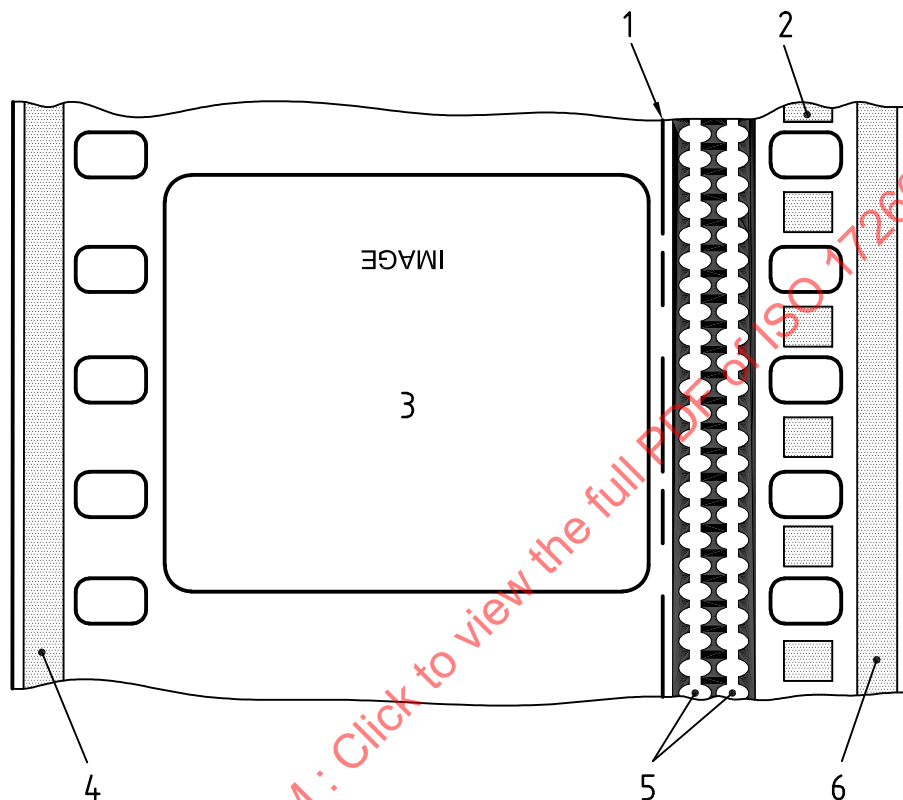
2.10 The positions and dimensions of the type III digital control track for 35 mm negative film for the printing of 70 mm positive print film shall be as shown in Figure 7 and given in Table 9.

3 Analogue sound records

3.1 Channel 1 and channel 2 (often known as left total and right total) shall be positioned in line at an angle of $90^\circ \pm 5'$ to the reference edge of the film.

3.2 Channel 2 shall be recorded nearest the outer edge of the film, as shown in Figure 2.

3.3 The septum area between channels 1 and 2 shall be effectively opaque on prints.



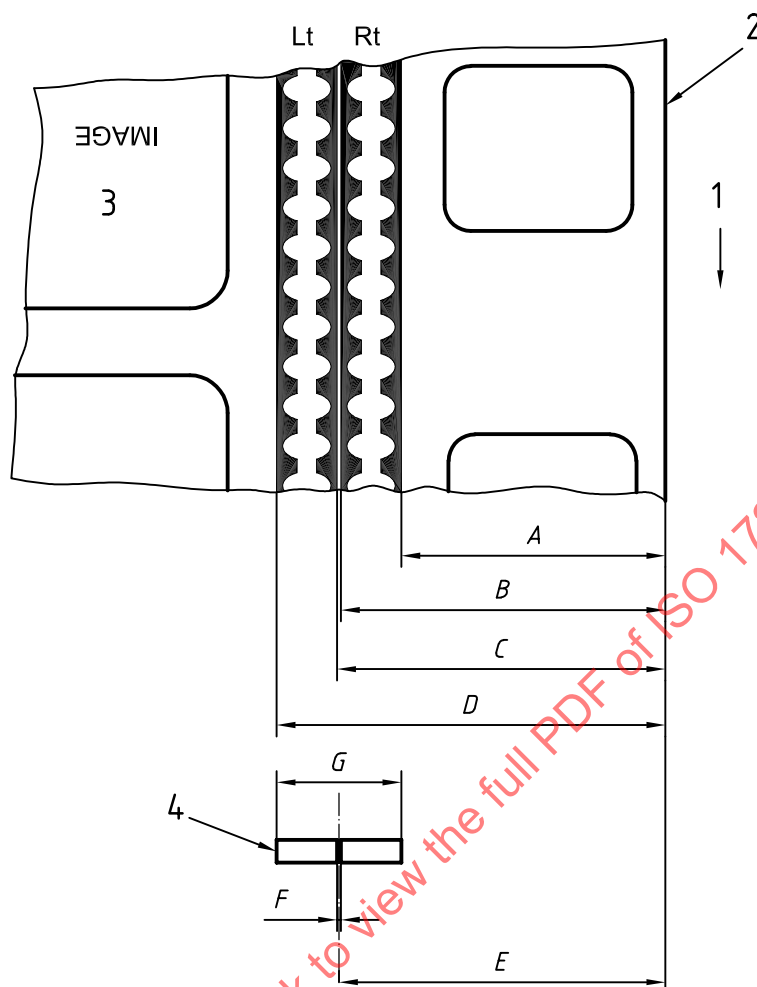
Key

- 1 Type III
- 2 Type I
- 3 Image
- 4 P track type II
- 5 Analogue sound records
- 6 S track type II

NOTE

- Type I: Interperforation — digital
- Type II: Outerperforation — digital
- Type III: Control track

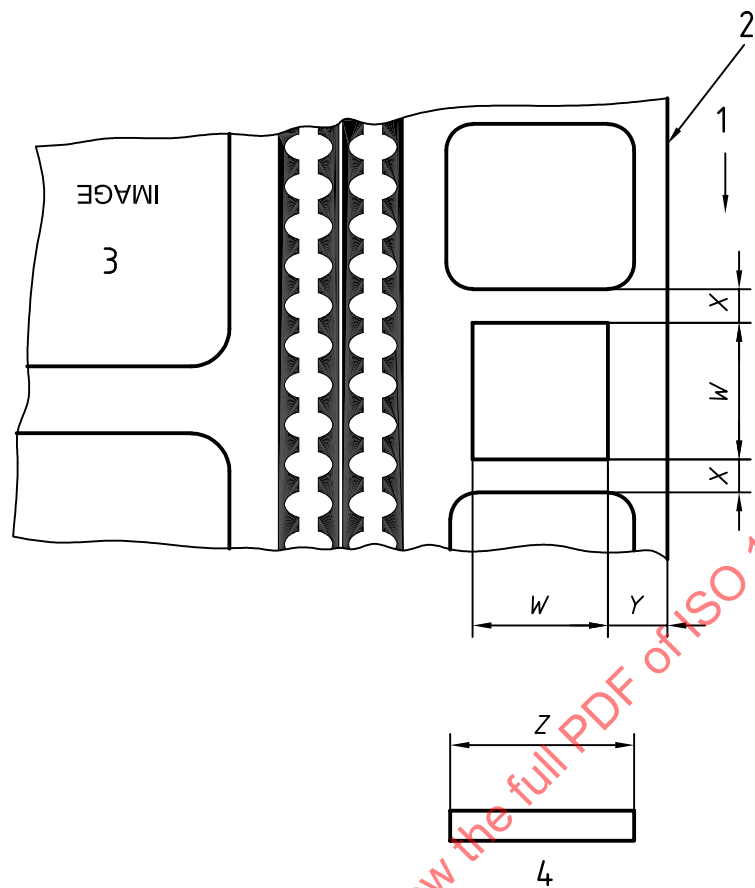
Figure 1 — Composite audio data track and control placement

**Key**

- 1 Direction of travel
- 2 Reference edge
- 3 Image
- 4 Scanning area

Figure 2 — Analogue area**Table 1 — SVA print dimensions**

Dimension	mm	in
A_{ref}	5,21	0,205
B	$6,05 \pm 0,05$	$0,238 \pm 0,002$
C	$6,30 \pm 0,05$	$0,248 \pm 0,002$
D_{ref}	7,14	0,281
E_{ref}	$6,18 \pm 0,03$	$0,243 \pm 0,001$
F_{ref}	0,05	0,002
G_{max}	2,13	0,084
Channel 1 Lt Track Centre: 0,264 5 in		
Channel 2 Rt Track Centre: 0,221 5 in		



- Key**
- 1 Direction of travel
 - 2 Reference edge
 - 3 Image
 - 4 Printer aperture

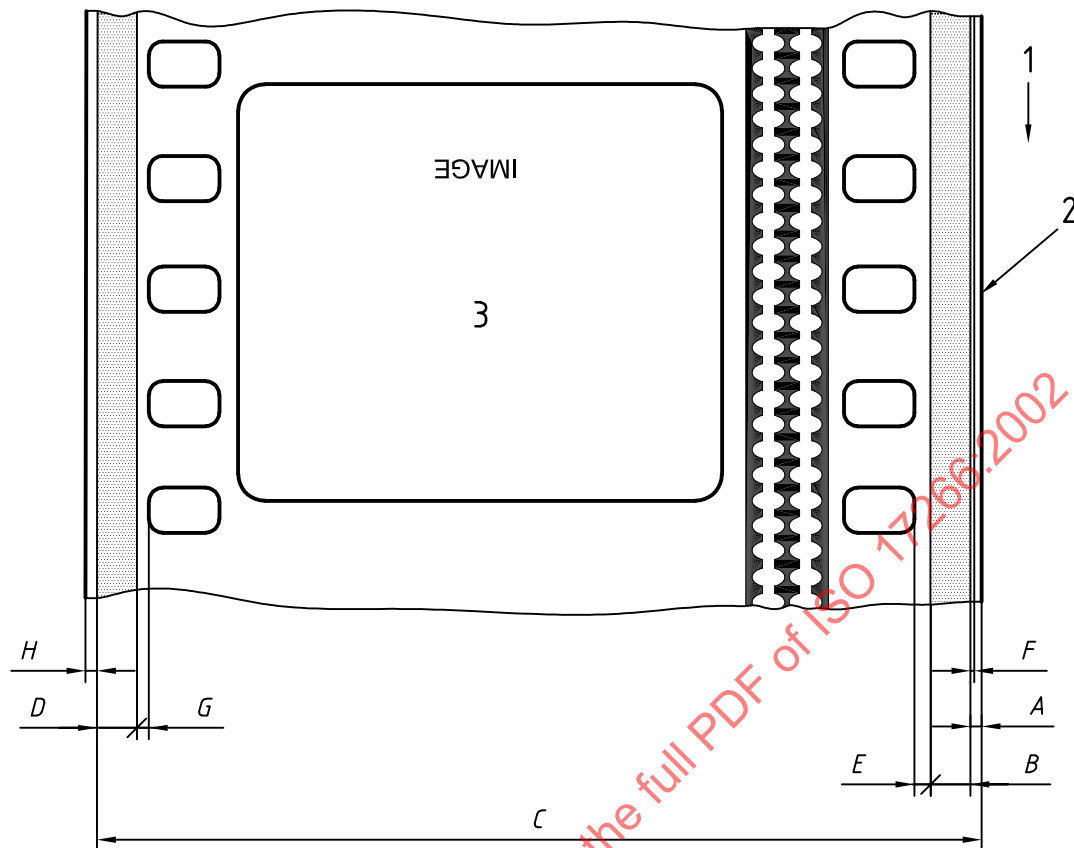
Figure 3 — Type I digital sound records

Table 2 — Type I digital print dimensions

Dimension	mm	in
W	2,41	0,095
X	$0,160 \pm 0,076\ 2$	$0,006\ 3 \pm 0,003$
Y	$2,185 \pm 0,076\ 2$	$0,086\ 0 \pm 0,003$
Z	2,77	0,109

Table 3 — Type I digital negative dimensions

Dimension	mm	in
X	$0,160 \pm 0,038\ 1$	$0,006\ 3 \pm 0,001\ 5$
Y	$2,185 \pm 0,038\ 1$	$0,086\ 0 \pm 0,001\ 5$

**Key**

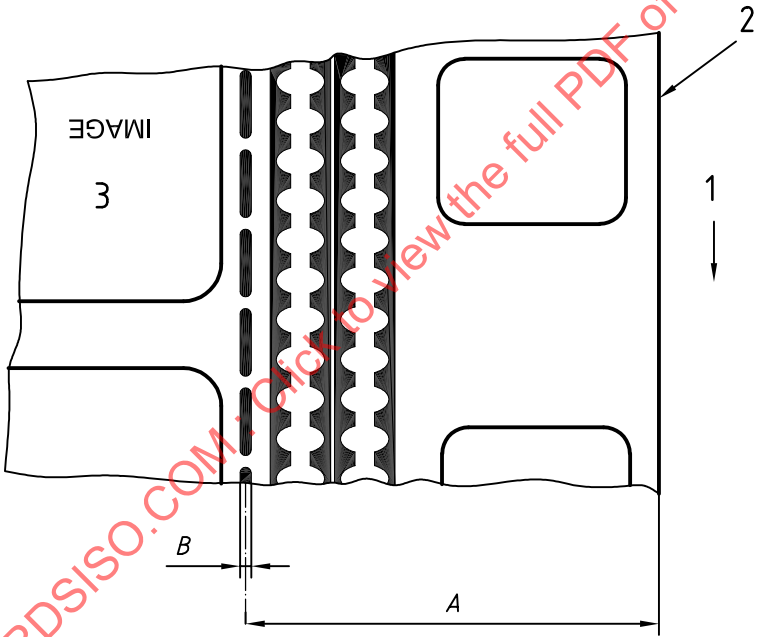
- 1 Direction of travel
- 2 Reference edge
- 3 Image

Figure 4 — Type II digital sound records**Table 4 — Type II digital print dimensions**

Dimension	mm	in	Description
<i>A</i>	$0,295 \pm 0,05$	$0,011\ 61 \pm 0,002\ 0$	Reference film edge to leading edge of "white" tracking start (S)
<i>B</i>	$1,536 \pm 0,02$	$0,060\ 47 \pm 0,000\ 8$	Data and tracking area (64 spots $\times$ 24 μ m)
<i>C</i>	$34,681 \pm 0,07$	$1,365\ 39 \pm 0,002\ 8$	Reference film edge to leading edge of "white" tracking start (P)
<i>D</i>	$1,536 \pm 0,02$	$0,060\ 47 \pm 0,000\ 8$	Data and tracking area (64 spots $\times$ 24 μ m)
<i>E</i>	$0,175 \pm 0,05$	$0,006\ 89 \pm 0,002\ 0$	End of data to perforated edge margin (S)
<i>F</i>	$0,120^{+0,1}_0$	$0,004\ 72^{+0,0039}_0$	Edge margin area (S)
<i>G</i>	$0,175 \pm 0,05$	$0,006\ 89 \pm 0,002\ 0$	End of data to perforated edge margin (P)
<i>H</i>	$0,120^{+0,1}_0$	$0,004\ 72^{+0,0039}_0$	Edge margin area (P)

Table 5 — Type II digital negative dimensions

Dimension	mm	inch	Description
<i>A</i>	0,295 ± 0,02	0,011 61 ± 0,000 8	Reference film edge to leading edge of “white” tracking start (S)
<i>B</i>	1,536 ± 0,02	0,060 47 ± 0,000 8	Data and tracking area (64 spots × 24 µm)
<i>C</i>	34,681 ± 0,04	1,365 39 ± 0,001 6	Reference film edge to leading edge of “white” tracking start (P)
<i>D</i>	1,536 ± 0,02	0,060 47 ± 0,000 8	Data and tracking area (64 spots × 24 µm)
<i>E</i>	0,175 ± 0,02	0,006 89 ± 0,000 8	End of data to perforated edge margin (S)
<i>F</i>	0,120 ^{+0,1} ₀	0,004 72 ^{+0,0039} ₀	Edge margin area (S)
<i>G</i>	0,175 ± 0,02	0,006 89 ± 0,000 8	End of data to perforated edge margin (P)
<i>H</i>	0,120 ^{+0,1} ₀	0,004 72 ^{+0,0039} ₀	Edge margin area (P)



- Key**
- 1 Direction of travel
 - 2 Reference edge
 - 3 Image

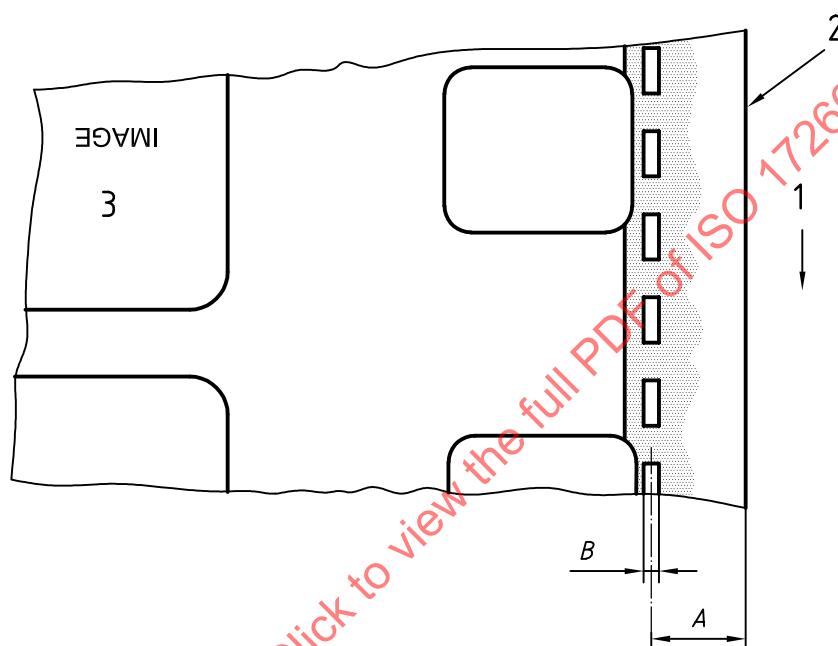
Figure 5 — Type III digital control track

Table 6 — Type III digital print dimensions

Dimension	mm	in
<i>A</i>	7,584 4 ± 0,05	0,298 6 ± 0,002
<i>B</i>	0,076 2 to 0,203 2	0,003 to 0,008

Table 7 — Type III digital negative dimensions, 35 mm

Dimension	mm	inch
<i>A</i>	$7,584\ 4 \pm 0,012\ 7$	$0,298\ 6 \pm 0,000\ 5$
<i>B</i>	0,076 2 to 0,203 2	0,003 to 0,008

**Key**

- 1 Direction of travel
- 2 Reference edge
- 3 Image

Figure 6 — Type III 70 mm control track-print

Table 8 — Type III digital print dimensions, 70 mm

Dimension	mm	in
<i>A</i>	$4,953 \pm 0,05$	$0,195\ 0 \pm 0,002$
<i>B</i>	$0,762 \pm 0,13$	$0,030 \pm 0,005$