

KSC6502-1983



KOREAN INDUSTRIAL STANDARD

Disk Records

1. Scope

This Korean Industrial Standard specifies disk records for acoustic instruments (hereinafter referred to as 'disk record') copied as the fixture of sound purposed for regeneration.

Remark In this standard, units and numerical values indicated with { } are based on International Unit System (SI), and are written for reference.

2. Definitions

For the purpose of this standard, the following definitions apply.

(1) Monophonic Signal

A single audio signal that contains one or more sources of sound for the purpose of a single channel regeneration.

(2) Stereophonic Signal

A pair of left and right audio signals that contain one or more sources of sound for the purpose of a cubic sound regeneration.

(3) Monophonic Record

Disk record of recorded monophonic signal.

(4) Stereophonic Record

Disk record of recorded stereophonic signal.

(5) Sound Recording

Reproducing a signal into sound groove shaped mechanical modulation waveforms.

(6) Groove

Spiral notch of modulation or nonmodulation formed on the surface of disk record.

(7) Inside Wall of Groove

Wall side of groove in the direction to the center of disk record.

(8) Outside Wall of Groove

Wall side of groove in the direction to the circumference of disk record.

Related Standards:

KS C 1503 Volume Unit Meters

IEC Publ. 98 Analogue Audio Disk Records and Reproducing Equipment

- (9) **Form of Groove**
Cross-sectional shape of groove.
- (10) **Pitch of Groove**
Proceeding width of groove per revolution.
- (11) **Lead-in Groove**
Large groove without sound recording starting the outermost circle of the disk record.
- (12) **Sound Groove**
Groove for common sound recording.
- (13) **Lead-over Groove**
Groove with pitch made larger than that of sound groove to distinguish not less than two sound recording parts.
- (14) **Lead-out Groove**
Long pitch groove without sound recording is succeeded by finishing groove after more than one revolution.
- (15) **Finishing Groove**
Concentric circle groove without sound recording succeeds lead-out groove.
- (16) **Sound Recording Part**
Sound groove part of the surface of disk record.
- (17) **Marker Space**
Proceeding groove part of disk record.

3. Kind

The kind of disk record is classified as shown in **Table 1**, depending on the outside diameter, revolutions per minute in use and method of sound recording.

Table 1. Kind

Normal Outside Diameter	Speed of Rotation	Sound Recording Method
17 cm	45 RPM	Monophonic or Stereophonic
	33 RPM	
25 cm	33 RPM	
30 cm	33 RPM	
	45 RPM	

4. Performance

Disk record shall have no defects in appearance and shall conform to performance shown in Table 2 when tested according to test methods specified in Clause 6.

Table 2. Performance

Item \ Kind	17 cm Record	25 cm Record	30 cm Record	Applicable Items of Test Method
Audition	Not hinder regeneration and don't have fault of inflation, etc.			6.3.1
SN Ratio (dB)	50 min.	58 min.	58 min.	6.3.2
Durability (SN Ratio)	50 min.	58 min.	58 min.	6.3.3
Eccentricity (mm)	0.2 max.	0.2 max.	0.2 max.	6.3.4
Warp (mm)	1.5 max.	1.5 max.	1.5 max.	6.3.5

5. Structure and Dimensions

5.1 General Structure

Disk record is made of plastic material and is molded in a disk form, on which sound grooves are formed.

5.2 Direction of Rotation

Direction of revolution is clockwise from the view of regeneration side.

5.3 Number of Revolution

Number of revolution shall comply with Table 3.

Table 3. Number of Revolution

Nominal Number of Revolution	Rated Number of Revolution (rpm)
45 revolution	45
33 revolution	33 1/3

5.4 Direction of Recording

Direction of sound recording is the direction of a regeneration pick-up proceeding from outside to inside of disk.

5.5 Sound Recording Method

5.5.1 Monophonic Recording

Recording by monophonic signal. The sound groove shake left and right about proceeding direction and in parallel with a surface of disk record.

5.5.2 Stereophonic Recording

Recording by stereophonic signal. The sound groove records in 2 directions inclined 45° from the surface of disk record at the angle of 90° between the left signal and the right signal in the plane containing center axis of disk record. It records the left signal on inside wall, the right signal on outside wall.

When the left signal and the right signal are in same phase with the same amplitude, the sound groove shake right and left side of proceeding direction and in parallel to a surface of disk record.

5.6 Shape and Dimensions of Groove

Shape and dimensions of groove shall comply with Figure 1 and Table 4.

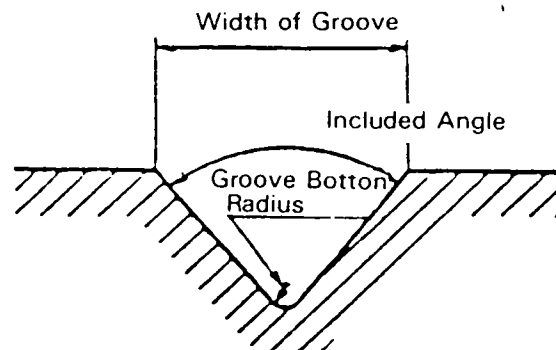


Fig. 1 Shape of Groove

Table 4. Measure of Groove

Unit: mm

Item \ Kind	33 Revolution and 45 Revolution	
	Mono Record	Stereo Record
Width of Groove	0.05 min.	(0.025 min.)
Groove Bottom Radius	0.005 max.	0.005 max.
Included Angle	90°	90°

- Remarks:** 1. Value in () is for reference only.
 2. The standard included angle is 90°.

5.7 Diameter and Pitch of Groove

Diameter and pitch of groove shall comply with Table 5.

Table 5. Diameter and Pitch of Groove

Unit: mm

Item \ Kind	17 cm Record	25 cm Record	30 cm Record
Diameter of the first sound groove	168 max.	242 max.	293 max.
Diameter of the last sound groove	106 min.	115.2 min.	115.2 min.
Diameter of the last groove	97 ± 1	106.4 ± 0.8	106.4 ± 0.8
Pitch of lead-in groove	0.8 to 1.6	0.8 to 1.6	0.8 to 1.6
Pitch of lead-over groove	1.6 max.	1.6 max.	1.6 max.
Pitch of lead-out groove	4 to 9	4 to 9	4 to 9

- Remarks** 1. The first sound groove contains a 2 to 4 seconds part without sound recording at the introduction part.
 2. When marker space is made within 130mm diameter, its width is less than 1mm.
 3. Revolving more than once, lead-out groove succeeds the last groove.