

KS C 5760-1985

KOREAN INDUSTRIAL STANDARD

Magnetic Tape Cassette Labelling and File Structure for Information Interchange

1. Scope

This Korean Industrial Standard specifies the magnetic tape cassette labelling and the file structure used as media for information interchange.

The following three categories corresponding to the complexity of machines and applicable system, are specified by this Korean Industrial Standard:

(1) Fundamental System

Filing only by using tape marks.

(2) Dense System

Filing by using a special data block of information that uses only numerical number which can be recorded by the machine.

(3) Extension System

Filing by adding some new labels to the label system specified in **KS C 5711** (Magnetic Tape Cassette for Information Interchange) in order to define a broad label system.

These standards can be applied to cassette tapes which have a larger volume as well as to 3.81mm magnetic cassette tape specified in **KS C 5625** (Recorded Magnetic Tape Cassette for Information Interchange).

2. Definition

Among the main terms used in the Korean Industrial Standard, the terms for data record units are defined as in Table 1: they are explained in both logical conception and physical conception.

Related Standards

KS C 5601	Code for Information Interchange
KS C 5624	Magnetic Cassette Tape for Information Interchange
KS C 5625	Recorded Magnetic Tape Cassette for Information Interchange
KS C 5711	Magnetic Tape Labelling and File Structure for Information Interchange

Table 1. Definitions of Terms for Data Recording Units

Logical Conception		Physical Conception	
Record	Related data group treated as one unit of information	Block	Character group which is recorded and read continuously as one unit or ends with the gap between block and block
File	Information group which consists of records related to one topic.	Volume	Physical unit of record media that can be divided.
Example	Article specifications related to business material		For example, complete cassette which consists of one of following:
	File may be recorded in one track, the whole or part of volume and in a min. of 2 volumes.	(1)	Two track used sequentially and continuously for data interchange as specified in KS C 5624 (Magnetic Cassette Tape for Information Interchange)
		(2)	One track used sequentially for data interchange (the first track or side A). In this case, using the second track or side B is defined as being specified in KS C 5624 in accordance with the agreement between the concerned parties.
File Separating	A part of one file recorded on one track of one cassette. During file separating, the other file separating shall not be recorded.		
File Set	A group of related files (min.1) recorded continuously in one volume set.	Volume Set	A group of volumes (min.1) where only one file set is recorded.

Other definitions are as follows.

(1) **Labelling**

Labelling distinguishes each volume, track, the volume and track a block located in the beginning or the end of file, or file itself. Labelling also represents characteristics or boundaries but is not a part of file.

(2) Labelling Perceptible Character

To distinguish label, min. one character, which is recorded during labelling.

(3) Character Used in Labelling

Characters specified in **KS C 5601** (Code for Information Interchange) is partially used in labelling. Admissible characters are as follows.

(a) "n" character

Any numerical character of 0 to 9.

(b) "a" character

Any character which is in second to fifth row in the seven bit list of symbols for of **KS C 5601**. But if persons concerned in information interchange agree with each other, they may use any characters located in tenth to thirteenth row in the eight bit list of symbols for alphabet or Korean of **KS 5601** in ensured field for volume character, file perceptible character, system and users.

Remarks 1. In case of international information interchange, 5 / 15 (-) and following seven characters which do not accord with each country among characters located in second to fifth row of seven bit list of symbols for alphabet **KS C 5601** shall not be included.

2 / 3 (#), 2 / 4 (\$), 4 / 0 ((), 5 / 11 ([), 5 / 12 (\), 5 / 13 (]) 5 / 14 (^)

2. Above restrictions are established for best interchangeability and accordance of character printing. Inspection corresponding to above restrictions are not forced.

(4) Tape Mark

Boundary character representing boundaries between file data and label and between each label. In the fundamental system, it is used to separate files.

Remark The form of tape mark is specified in the related KS and is represented as "" in these standards.

(5) Double Tape Mark

Two continuous tape marks representing the end of a volume or the end of a file set.

Remark Except in the fundamental system, when null file on volume is separated or null file exists, two continuous tape marks appear. In this case it is not recognized as a double tape mark, but is recognized as null file separating and two tape marks surrounding null files. "Null" in these standards means that one block does not

exist between tape mark behind file index labelling and tape mark before this file division or end of volume labelling of file, end of track labelling or end of file labelling.

(6) End of Middle Track and Start of Middle Track

End of preceding track which is continuously used is the end of middle track and the start of following track is the start of middle track.

3. Basic System

3.1 Summary

In the basic system, one volume is composed of one file or more and the distinction of files is only by tape marks. Each volume is independent and it does not admit recording on file on two volumes or more. It does not admit labelling of magnetic. Record and detecting process at the end of data on the track shall comply with the related KS standard.

3.2 Usage of Tape Mark

Tape marks which indicate volume and composition of file are as follows.

- | | |
|---|----|
| (1) Start of volume | * |
| (2) Dividing character of files | * |
| (3) End of middle track | * |
| (4) Start of middle track | * |
| (5) End of data (and end of volume) | ** |

Tape marks do not record dividing character of files continuously because a dividing character followed by another one of files is regarded as the end of data. So the division of null files which is depicted by definition in sub-clause 2.(5) of double tape mark does not exist. When dividing character of file appears behind tape mark of start of middle track, these two marks are not regarded as end of data (Refer to sub-clause 3.4 and 3.5).

3.3 Composition of Files

Files are composed by using the tape mark. Composite diagrams of files according to these rules are as in Figures 1 and 2. Left side of each figure means start of tape and right side of each figure means end of tape. Rectangular parts represent tracks.

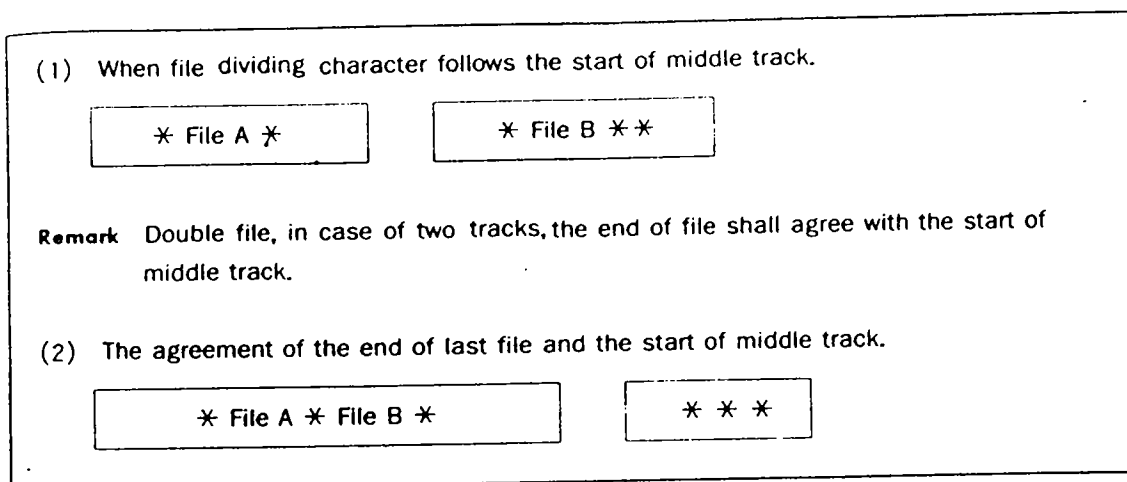


Fig. 2 File Structure (Special Case)

3.5 The Agreement of the End of File and the End of Middle Track

This situation happens when a tape division marker is detected in the middle of the system recording tape mark following a file. In this case, choose one of following two methods.

3.5.1 Case that Corresponding File is Not the Last File Set

Complete corresponding file, interpreting as the end of middle track. In next track, record file divider, after recording the end of data recording the second tape mark as (1) of Figure 2.

3.5.2 Case that the Corresponding File is the Last File of File Set

The system completes track and represents simultaneously the end of data recording the second tape mark as (1) and (3) of Figure 1.

3.6 The Final Management of Usable Area

In case of detecting tape division marker in the last track in which volume is being capable of recording, the system shall complete file by recording the tape mark of the end of data as Figure 1:

3.7 Record Density

The blocks recorded on all volumes including one file set shall be recorded in the same density.

3.4 Consistency of End of File and Start of Middle Track

This situation occurs when ending mark is detected in the middle of recording of last data block. On this occasion, system completes the process of relevant track and begins track and proceeds with files continuously, but records only dividing character of files in this track without recording of data block of relevant files. Thereafter select one of two following methods.

3.4.1 If relevant file is not the end of file of file set, then it is composed of files like (1) in Figure 2.

3.4.2 If relevant file is the end of file of file set, then it is composed of files like (2) in Figure 2. On this occasion the last two tape marks are interpreted as the end of data.

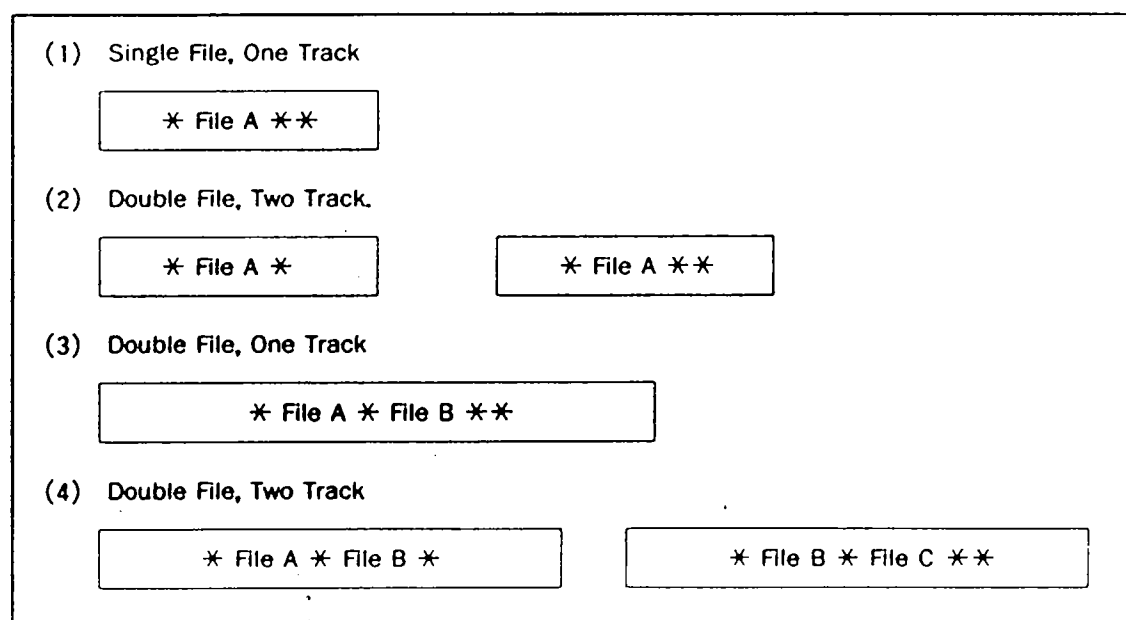


Fig. 1 File Structure

3.8 By-pass Record, Check Point Record

Only the tape block which will be interchanged, shall be recorded in the magnetic cassette tape for information interchange. As there is no unified standard and no distinguishable means of by-pass record and check point record, these shall not be recorded in the magnetic cassette tape for information interchange.

4. Dense System

4.1 Abstract

Dense system consists of labelling and tape marks such that a min. of one file is recorded magnetically on a min. of one volume. Labelling specifies the use of "n" character. The record of the end of data between two tracks and detecting method follow the K.S standard.

4.2 Usage of Tape Marks

Tape marks are used in order to divide labelling from file data or labelling from labelling.

4.3 Form and Contents of Labelling

Labelling for position of characters is designated as 1 to 32 as a block of thirty two characters.

Table 2. Classification of Labelling

Type	Name	Symbol	Perceptible Character
Start of File or File Dividing	File Index Labelling	HDR	1
End of Track	End of Track Labelling	ETR(')	3
End of Volume	End of Volume Labelling	EOV(')	7
End of File of Last File Dividing	End of File Labelling	EOF	9

Remark (') ETR and EOV represent the end of first or middle file dividing.