
International Standard



5654/2

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Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using two-frequency recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on one side — Part 2 : Track format

Traitement de l'information — Échange de données sur cartouches à disquette de 200 mm (8 in) utilisant un enregistrement à deux fréquences à 13 262 ftprad, 1,9 tpmm (48 tpi), sur une face — Partie 2 : Schéma de piste

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 5654/2 was prepared by Technical Committee ISO/TC 97, *Information processing systems*.

ISO 5654/2 was first published in 1982. This second edition cancels and replaces the first edition, of which it constitutes a minor revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using two-frequency recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on one side

Part 2 : Track format

0 Introduction

ISO 5654 specifies the characteristics of 200 mm (8 in) flexible disk cartridges recorded at 13 262 ftprad, 1,9 tpmm (48 tpi), on one side using two-frequency recording.

ISO 5654/1 specifies the dimensional, physical and magnetic characteristics of the cartridge, so as to provide physical interchangeability between data processing systems.

Together with the labelling scheme specified in ISO 7665, ISO 5654/1 and ISO 5654/2 provide for full data interchange between data processing systems.

1 Scope and field of application

This part of ISO 5654 specifies the quality of recorded signals, track layout and the track format to be used on the above-mentioned flexible disk cartridge which is intended for data interchange between data processing systems.

NOTE — Numeric values in the SI and/or Imperial measurement system in this part of ISO 5654 may have been rounded off and therefore are consistent with, but not exactly equal to, each other. Either system may be used, but the two should be neither intermixed nor re-converted.

The original design was made using the Imperial measurement system.

2 References

ISO 646, *Information processing — ISO 7-bit coded character set for information interchange.*

ISO 2022, *Information processing — ISO 7-bit and 8-bit coded character sets — Code extension techniques.*

ISO 4873, *Information processing — ISO 8-bit coded character set for information interchange.*

ISO 5654/1, *Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using two-frequency recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on one side — Part 1 : Dimensional, physical and magnetic characteristics.*

ISO 7665, *Information processing — File structure and labelling of flexible disk cartridges for information interchange.*

3 General recording requirements

3.1 Mode of recording

The mode of recording shall be two-frequency where the start of every bit cell is a clock flux transition. A ONE is represented by a data flux transition between two clock flux transitions.

3.2 Track location tolerance of the recorded flexible disk cartridge

The centrelines of the recorded tracks shall be within $\pm 0,085$ mm (0.003 3 in) of the nominal positions, when measured in the testing environment specified in ISO 5654/1. This tolerance corresponds to twice the standard deviation.

3.3 Recording offset angle

At the instant of writing or reading a magnetic transition, the transition may have an angle of $0^\circ \pm 18'$ with the radius. This tolerance corresponds to twice the standard deviation.

3.4 Density of recording

3.4.1 The nominal density of recording shall be 13 262 ftprad, 1,9 tpmm (48 tpi). The resulting nominal spacing between two clock flux transitions, the nominal bit cell length, is 151 μ rad.

3.4.2 The long-term average bit cell length shall be the average bit cell length measured over a sector. It shall be within ± 3 % of the nominal bit cell length.

NOTE — It is recognized that at extremes of supply frequency encountered on computer sites the deviation may be ± 5 % in exceptional circumstances. Successful data interchange may still then be possible provided that formatting of the cartridge and subsequent writing of data are not carried out at the opposite limits of this range.

3.4.3 The short-term average bit cell length, referred to a particular bit cell, shall be the average of the lengths of the preceding eight bit cells. It shall be within ± 8 % of the long term average bit cell length.