INTERNATIONAL STANDARD

ISO 11928-1

First edition
2000-04-01

Micrographics — Quality control of graphic COM recorders —

Part 1: Characteristics of the test frames

Micrographie — Contrôle de la qualité des imprimantes COM graphiques —

Partie 1: Caractéristiques des cibles de contrôle

Reference number
ISO 11928-1:2000(E)

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Foreword

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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 part of ISO 11928 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11928-1 was prepared by Technical Committee ISO/TC 171, *Document imaging applications*, Subcommittee SC 1, *Quality*.

ISO 11928 consists of the following parts, under the general title *Micrographics — Quality control of graphic COM recorders*:

— *Part 1: Characteristics of the test frames*

— *Part 2: Quality criteria and control*

Introduction

This part of ISO 11928 has been prepared because increasing numbers of technical drawings are now produced on COM, and, although their quality is usually reasonable, they are not always comparable with microfilm copies of hard copy drawings. This can cause difficulty when both kinds of drawing are put into aperture cards and used in systems designed to deal with microfilm copies of hard-copy-drawings.

This part of ISO 11928 has therefore been prepared to help users to establish procedures that should ensure that the quality of COM-generated drawings is both acceptable in itself and comparable in quality with technical drawings on conventional microfilm that complies with ISO 3272-1, ISO 3272-2 and ISO 3272-3.

Micrographics — Quality control of graphic COM recorders —

Part 1:
Characteristics of the test frames

1 Scope

This part of ISO 11928 specifies the characteristics of the test frames used for evaluating the image quality of microforms from graphic COM recorders.

It applies to graphic COM recorders that are capable of producing both alphanumeric and graphic images output onto black-and-white films.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 11928. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 11928 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6196-7:1992, *Micrographics — Vocabulary — Part 7: Computer micrographics.*

3 Terms and definitions

For the purposes of this part of ISO 11928, the terms and definitions given in ISO 6196-7 and the following apply.

3.1
test frame
data file which generates test images on a COM recorder

4 Test frames

4.1 Test frame for checking frame size, linearity and positioning

The test frame (see Figure 1) shall comprise a rectangular grid equal in size to the largest image that the COM recorder produces. It shall be divided by straight lines drawn in both axes at intervals of one-eighth of the length of the long axis, from the centre of the frame. Diagonal lines shall connect the opposite corners of the frame and the midpoints of the sides of the frame.

4.2 Test frame for checking resolution, legibility and density

The test frame (see Figure 2) shall comprise:

a) patterns composed of five-line groups with a letter beside each group to identify it. The spacial frequency of the lines within the five-line groups shall be chosen to ensure that the point of resolution failure occurs within the range;

b) groups of lower-case letter “e” in various sizes, with a numeral beside each group to identify it. The sizes of the letter “e” shall be chosen to ensure that the point of legibility failure occurs within the range;

c) an area exposed by the COM recorder to produce an area sufficient to measure minimum density.

NOTE This area may be a separate frame for each measurement.

4.3 Test frame for checking radial recording

The test frame (see Figure 3) shall comprise parallel pairs of radial lines spaced at 22,5°, with the separation in each pair of lines being equal to the line thickness.

4.4 Test frame for checking curved lines

The test frame (see Figure 4) shall comprise a number of concentric circles, with radial lines spaced at 45°. The four outer circles shall be drawn with double lines.

4.5 Test frame for checking character display and rotation

The test frame (see Figure 5) shall comprise of lines of characters, one line at each of the available character sizes, and small lines of rotated characters at the corners of the frame.

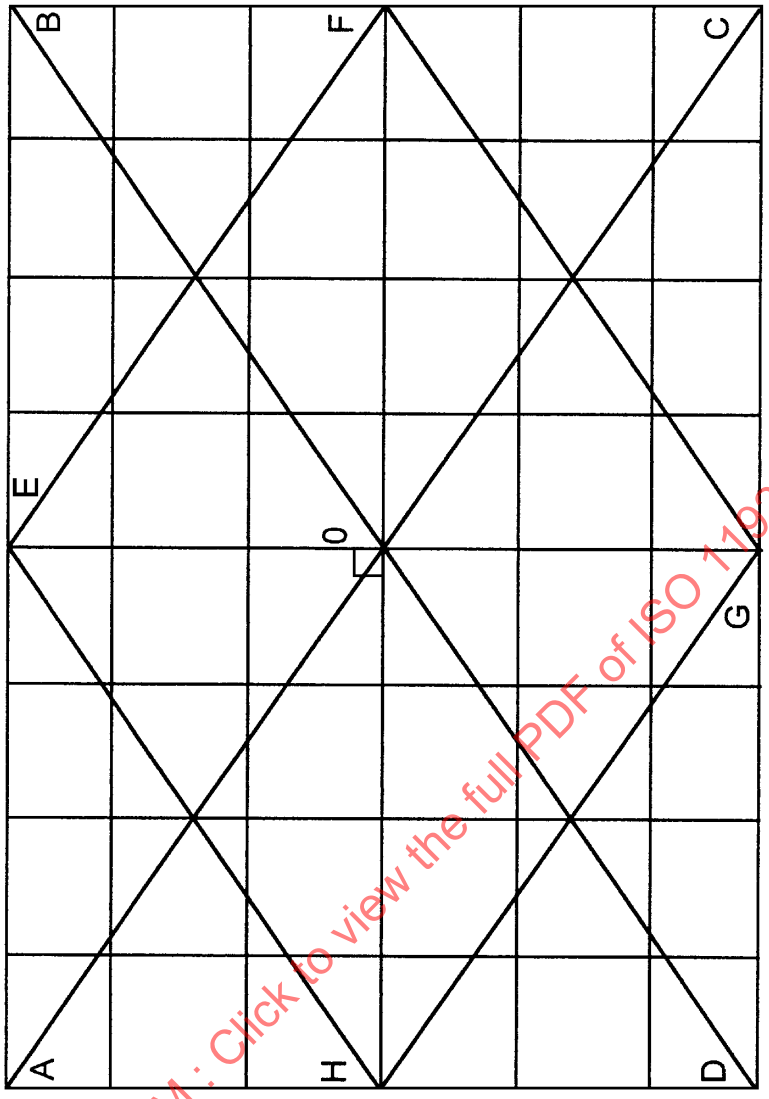

Figure 1 — Sample layout of test frame for checking frame size, linearity and positioning

NOTE The letters at the corners, midpoints and centre of the frame have been added for ease of reference in the text. They need not appear on the film.

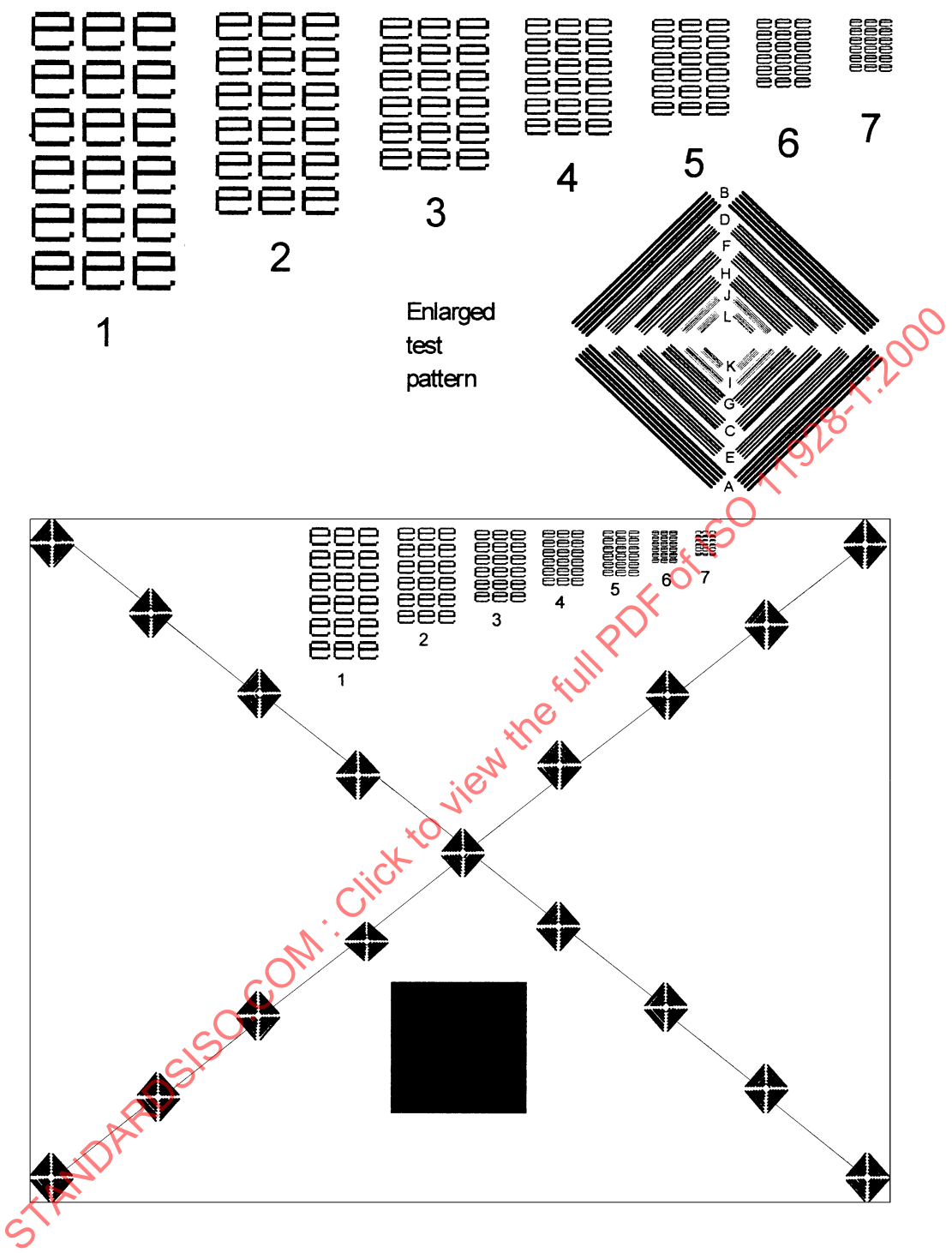

Figure 2 — Sample layout of test frames for checking resolution, legibility and density

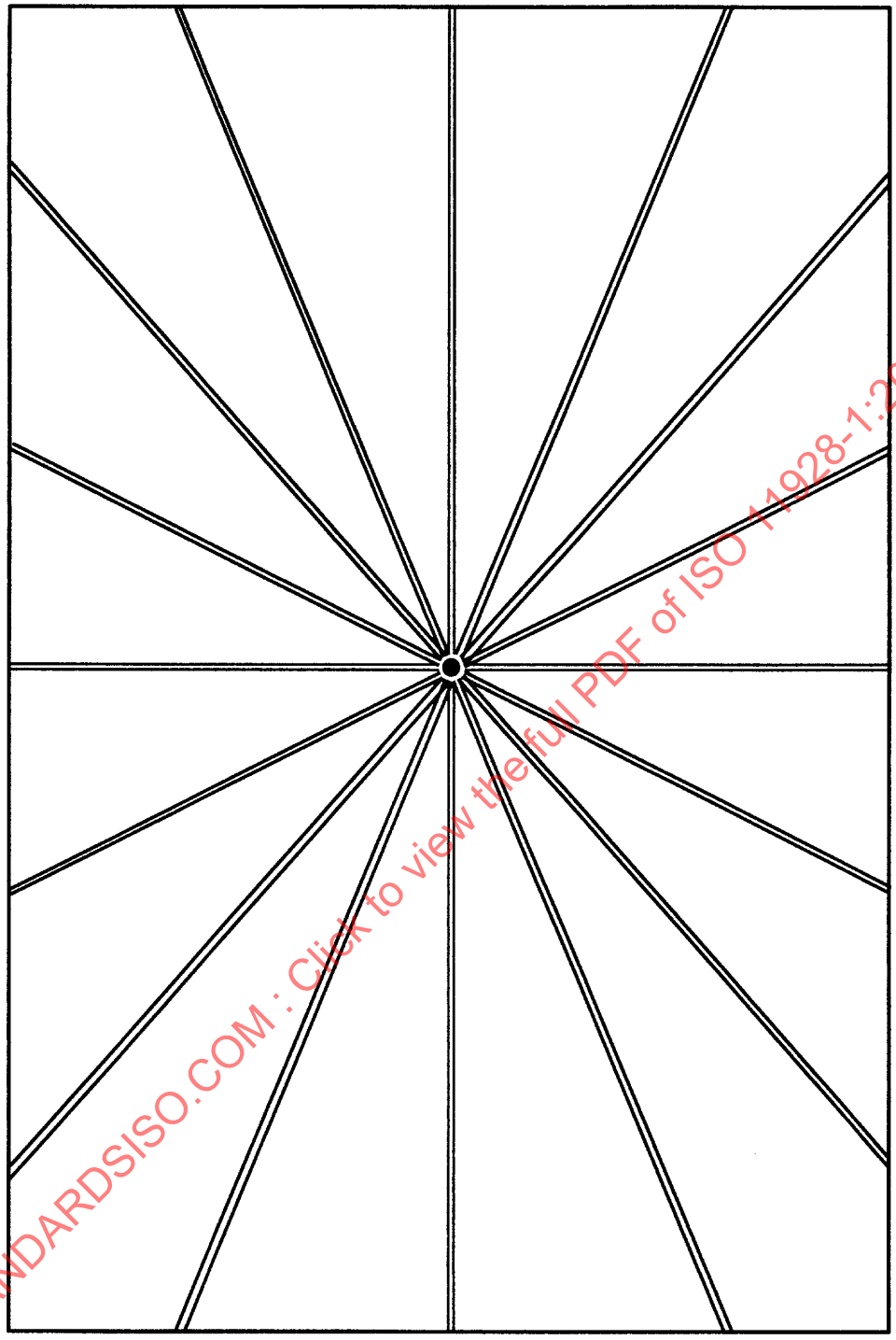

Figure 3 — Sample layout of test frame for checking radial recording