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**U.S. DEPARTMENT OF COMMERCE/National Bureau of Standards**



**CHARACTER SET  
FOR HANDPRINTING**

**CATEGORY: HARDWARE STANDARD**

**SUBCATEGORY: CHARACTER RECOGNITION**

FIPS PUB 33-1

## Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards (NBS) is the official publication relating to standards adopted and promulgated under the provisions of Public Law 89-306 (Brooks Act) and under Part 6 of Title 15, Code of Federal Regulations. These legislative and executive mandates have given the Secretary of Commerce important responsibilities for improving the utilization and management of computers and automatic data processing in the Federal Government. To carry out the Secretary's responsibilities, the NBS, through its Institute for Computer Sciences and Technology, provides leadership, technical guidance, and coordination of Government efforts in the development of guidelines and standards in these areas.

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## Abstract

This FIPS PUB announces the adoption of the American National Standard X3.45-1982, Character Set for Handprinting, as a Federal Standard. This standard provides the description, scope, and application rules for a character set for handprinting. A major purpose of this standard is to reduce the cost of data input into ADP systems which use Optical Character Recognition (OCR) equipment. This character set remains the same as the previous standard set with the exception of the Yen symbol.

Key words: character sets; character shape; character sizes; Federal Information Processing Standards; handprinting; Optical Character Recognition.



## Federal Information Processing Standard Publication 33-1

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Announcing the Standard for

### CHARACTER SET FOR HANDPRINTING



Federal Information Processing Standard Publications are issued by the National Bureau of Standards pursuant to the Federal Information Processing Standards Act of 1966 (amended, Public Law 95-278, 90 Stat. 1231, 12315, dated May 11, 1973) and Part 6 of Title 15 Code of Federal Regulations (CFR).

**Name of Standard.** Character Set for Handprinting (FIPS PUB 33-1)

**Category of Standard.** Hardware Standard; Character Recognition

**Explanation.** This FIPS PUB announces the adoption of the American National Standard X3.43-1982, Character Set for Handprinting, as a Federal Information Processing Standard. The standard provides the definition, scope, and application rules for a character set for handprinting. A major purpose of the standard is to reduce the cost of data input into ADP systems which use optical character recognition. This revised standard supersedes FIPS 33 in its entirety.

**Approving Authority.** Secretary of Commerce

**Maintenance Agency.** U.S. Department of Commerce, National Bureau of Standards (Institute for Computer Sciences and Technology).

**Cross Index.** American National Standard Character Set for Handprinting (ANSI X3.43-1982).

#### Related Documents.

- a. Federal Information Processing Standards Publication (FIPS PUB) 40, *Guideline for Optical Character Recognition Forms*.
- b. Federal Information Processing Standards Publication (FIPS PUB) 85, *Optical Character Recognition (OCR) Inks*.
- c. Federal Information Processing Standards Publication (FIPS PUB) 90, *Guideline for Optical Character Recognition (OCR) Print Quality*.
- d. Federal Information Processing Standards Publication (FIPS PUB) 1-1, *Code for Information Interchange*.
- e. Federal Information Processing Standards Publication (FIPS PUB) 15, *Subsets of the Standard Code for Information Interchange*.
- f. American National Standard X3.86-1980, *American National Standard for Optical Character Recognition (OCR) Inks*.
- g. American National Standard X3.99-1983, *American National Standard for Information Systems — Optical Character Recognition (OCR) — Guidelines for OCR Print Quality*.
- h. American National Standard X3.4-1977, *American National Standard for Code for Information Interchange (ASCII)*.

**Applicability.** This standard is applicable to Optical Character Recognition (OCR) systems utilizing any part or all of the character set contained herein when used in data entry systems. However, when data or information is being prepared using OCR techniques for the purposes of the interchanging information, the appropriate graphic or control characters of FIPS PUB 1-1, *Code for Information Interchange*, or an appropriate subset as defined in FIPS PUB 15, *Subsets of the Standard Code for Information Interchange*, shall be used for such interchange.

**Specifications.** This standard adopts in whole the American National Standard X3.45-1982, Character Set for Handprinting.

**Qualifications.** The American National Standard Character Set for Handprinting describes a set of characters and associated procedural rules for use in numeric handprinted characters. Additional standards and information sources are required to describe the full set of necessary characteristics of an installed, operating OCR system. In general, these cover the topics of OCR Forms, OCR Print Quality, and OCR Tutorial Papers.

The set of characters and associated procedural rules described in this standard may also provide a method of improved human-to-human communication. Such an application of the standard is optional; however, it is urged that the use of the standard for such human-to-human communications be carefully considered for its contribution to increased efficiency and ease of operation wherever handprinted characters are involved in a data processing environment.

**Special Information.** The original character set remains unchanged with the exception of the Yen symbol. The Yen symbol was redefined (simplified) by the American National Standards Institute Technical Committee for OCR in conjunction with the Japanese Industrial Standards Committee on OCR.

**Implementation.** The earlier version of this standard (FIPS PUB 33) became effective on October 1, 1974. This new edition becomes effective November 5, 1984.

**Where to Obtain Copies.** Copies of this publication are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. (Sale of the included specifications document is by arrangement with the American National Standards Institute.) When ordering, refer to Federal Information Processing Standards Publication 33-1 (FIPSPUB33-1), and title. Payment may be made by check, money order, purchase order, credit card, or deposit account.