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



**MAGNETIC TAPE CASSETTES
FOR INFORMATION INTERCHANGE
(3.810 mm [0.150 in] TAPE
AT 32 bpm [800 bpi], PE)**

**CATEGORY: HARDWARE STANDARD
SUBCATEGORY: INTERCHANGE CODES AND MEDIA**

U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, Secretary

Dr. Sidney Harman, Under Secretary

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NATIONAL BUREAU OF STANDARDS, Ernest Ambler, Acting Director

Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards is the official publication relating to standards adopted and promulgated under the provisions of Public Law 89-306, and Part 6 of Title 15 Code of Federal Regulations. The entire series constitutes the FEDERAL INFORMATION PROCESSING STANDARDS REGISTER.

The series is used to announce Federal Information Processing Standards, and to provide standards information of general interest and an index of relevant standards publications and specifications. Publications that announce adoption of standards provide the necessary policy, administrative, and guidance information for effective standards implementation and use. The technical specifications of the standard are usually attached to the publication, otherwise a reference source is cited.

Comments covering Federal Information Processing Standards and Publications are welcomed, and should be addressed to the Associate Director for ADP Standards, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234. Such comments will be either considered by NBS or forwarded to the responsible activity as appropriate.

ERNEST AMBLER, *Acting Director*

Abstract

This FIPS PUB announces the adoption of the American National Standard X3.48-1977, Magnetic Tape Cassettes for Information Interchange (3.810-mm [0.150-in] Tape at 32 b/mm [800 bpi], PE). This standard specifies the physical, magnetic, and recorded characteristics of a 3.810 mm (0.150 in) magnetic tape cassette in order to provide for data interchange between information processing systems at a recording density of 32 bits per millimeter (800 bits per inch) using phase encoding techniques. The magnetic tape cassette consists of a twin hub co-planar type cassette containing 3.810 mm (0.150 in) wide magnetic tape. It is one of a series of Federal Standards implementing the Standard Code for Information Interchange (ASCII) on magnetic tape media.

Key words: Communications; computers; computer system hardware; data processing; data processing equipment; information systems; magnetic tape recording; magnetic tapes; magnetic tape transports; standards.

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ANNOUNCING THE STANDARD FOR

MAGNETIC TAPE CASSETTES FOR INFORMATION INTERCHANGE

(3.810 mm [0.150 in] TAPE AT 32 bpmm [800 bpi], PE)

Federal Information Processing Standards Publications are issued by the National Bureau of Standards pursuant to the Federal Property and Administrative Services Act of 1949, as amended, Public Law 89-306 (79 Stat. 1127), Executive Order 11717 (38 FR 12315, dated May 11, 1973) and Part 6 of Title 15 Code of Federal Regulations (CFR).

Name of Standard. Magnetic Tape Cassettes for Information Interchange (3.810 mm [0.150 in] Tape at 32 bpmm [800 bpi], PE) (FIPS PUB 51).

Category of Standard. Hardware Standard, Interchange Codes and Media.

Explanation. This standard specifies the physical, magnetic, and recorded characteristics of a 3.810 mm (0.150 in) magnetic tape cassette in order to provide for data interchange between information processing systems at a recording density of 32 bits per millimeter (800 bits per inch) using phase encoding techniques. The magnetic tape cassette consists of a twin hub co-planar type cassette containing 3.810 mm (0.150 in) wide magnetic tape. It is one of a series of Federal Standards implementing the Standard Code for Information Interchange (ASCII) on magnetic tape media.

Approving Authority. Secretary of Commerce.

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

Cross Index.

- a. FIPS PUB 1, Federal Standard Code for Information Interchange (ASCII).
- b. FIPS PUB 35, Code Extension Techniques in 7 or 8 Bits.
- c. American National Standard X3.48-1977, Magnetic Tape Cassettes for Information Interchange (3.810-mm [0.150-in] Tape at 32 bpmm [800 bpi], PE).
- d. At the time of publication of this FIPS PUB, a standard for dual track complementary return-to-bias four state recording (CRB) for a 3.810 mm (0.150 in) magnetic tape cassette was being developed by the American National Standards Institute. This voluntary industry standard, when available, will be considered for adoption as a FIPS.

Applicability. This standard is applicable to the acquisition and use of all magnetic tape cassette recording and reproducing equipment employing 3.810 millimeter (0.150 inch) wide magnetic tape

at recording densities of 32 bits per millimeter (800 bits per inch) using phase encoding. Federal information processing systems employing such equipment, including associated software, shall provide the capability to accept and generate recorded magnetic tape cassettes in compliance with the requirements set forth in this standard.

Specifications. This standard adopts the requirements set forth in the American National Standard X3.48-1977, Magnetic Tape Cassettes for Information Interchange (3.810-mm [0.150-in] Tape at 32 bpmm [800 bpi], PE).

Implementation Schedule. All applicable equipment ordered on or after the date of this FIPS PUB must be in conformance with this standard unless a waiver has been obtained in accordance with the procedure described below. Exceptions to this standard are made in the following cases:

- a. For equipment installed or on order prior to the date of this FIPS PUB.
- b. Where procurement actions are into the solicitation phase (i.e., Request for Proposals or Invitation for Bids has been issued) on the date of this FIPS PUB.

Special Information. Federal standards and/or specifications for unrecorded magnetic tape cassettes will be developed and issued by the General Services Administration. Until such time as these are available, American National Standard X3.48-1977, Magnetic Tape Cassettes for Information Interchange (3.810-mm [0.150-in] Tape at 32 bpmm [800 bpi], PE), should be cited in Federal procurements.

Also, GSA will provide terminology for use of this standard in Federal ADP acquisitions. This terminology will be incorporated in the Federal Property Management Regulations (Title 41, Subtitle C, Chapter 101, Subpart 101-32.13, Code of Federal Regulations).

Qualifications. None.

Waiver Procedure. Heads of agencies may waive the provisions of the implementation schedule. Proposed waivers relating to the procurement of non-conforming equipment will be coordinated in advance with the National Bureau of Standards. Letters should be addressed to the Associate Director for ADP Standards, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234. They should describe the nature of the waiver and set forth the reasons therefor.

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