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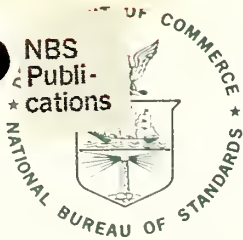
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DEC 7 1979

JE 468
A343
NO. 52
1978

Reference

FIPS PUB 52



FEDERAL INFORMATION
PROCESSING STANDARDS PUBLICATION
1978 JULY 15

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



**RECORDED MAGNETIC TAPE CARTRIDGE
FOR INFORMATION INTERCHANGE,
4-TRACK, 6.30 mm (1/4 in),
63 bps (1600 bpi), PHASE ENCODED**

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

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

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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, *Director*

Abstract

This FIPS PUB announces the adoption, with one exception, of the American National Standard X3.56-1977, Recorded Magnetic Tape Cartridge for Information Interchange, 4 Track, 0.250 in (6.30 mm), 1600 bpi (63 bpm), Phase Encoded. This standard specifies the recorded characteristics for a 6.30 mm (1/4 in) wide magnetic tape cartridge with either one, two or four serial data tracks in order to provide for data interchange between information processing systems, communication systems, and associated equipment at a recording density of 63 bits per millimeter (1600 bits per inch) using phase encoding techniques. This standard is one of a series of Federal Standards implementing the Federal Standard Code for Information Interchange (FIPS 1) on magnetic tape media.

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

Nat. Bur. Stand. (U.S.), Fed. Info. Process. Stand. Publ. (FIPS PUB) 52, 4 pages

(1978)

CODEN:FIPPAT

For sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161



Federal Information Processing Standards Publication 52

1978 July 15



ANNOUNCING THE STANDARD FOR

RECORDED MAGNETIC TAPE CARTRIDGE FOR INFORMATION INTERCHANGE, 4-TRACK, 6.30 mm (1/4 in), 63 bpmm (1600 bpi), PHASE ENCODED

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. Recorded Magnetic Tape Cartridge for Information Interchange, 4-Track, 6.30 mm (1/4 in), 63 bpmm (1600 bpi), Phase Encoded (FIPS PUB 52).

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

Explanation. This standard specifies the recorded characteristics for a 6.30 mm (1/4 in) wide magnetic tape cartridge with either one, two or four serial data tracks in order to provide for data interchange between information processing systems, communication systems, and associated equipment at a recording density of 63 bits per millimeter (1600 bits per inch) using phase encoding techniques. This standard is one of a series of Federal Standards implementing the Federal Standard Code for Information Interchange (FIPS 1) 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.
- b. FIPS PUB 35, Code Extension Techniques in 7 or 8 Bits.
- c. American National Standard X3.56-1977, Recorded Magnetic Tape Cartridge for Information Interchange, 4 Track, 0.250 in (6.30 mm), 1600 bpi (63 bpmm), Phase Encoded.
- d. American National Standard X3.55-1977, Unrecorded Magnetic Tape Cartridge for Information Interchange.
- e. At the time of publication of this FIPS PUB, a standard for parallel, 4-track, recording for a 6.30 mm (1/4 in) magnetic tape cartridge was under development by the American National Standards Institute. This voluntary industry standard, when available, will be considered for Federal adoption as a FIPS.

Applicability. This standard is applicable to the acquisition and use of all magnetic tape cartridge recording and reproducing equipment employing 6.30 mm (1/4 in) wide magnetic tape with one, two or four independent serial data tracks at recording densities of 63 bits per millimeter (1600 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 cartridges in compliance with the requirements set forth in this standard.

Specifications. With one exception, this standard adopts the specifications set forth in American National Standard X3.56-1977, Recorded Magnetic Tape Cartridge for Information Interchange, 4 Track, 0.250 in (6.30 mm), 1600 bpi (63 bpmm), Phase Encoded. This exception changes the last sentence of paragraph 4.3.1 to read: "The eighth position shall be a zero when recording ASCII (FIPS 1) characters and can be other than zero when recording dense numeric, binary or extended (FIPS 35) code representations."

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 cartridges will be developed and issued by the General Services Administration. Until such time as these are available, American National Standard X3.55-1977, Unrecorded Magnetic Tape Cartridge for Information Interchange, 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.

Sixty days should be allowed for review and response by the National Bureau of Standards. However, the final decision for granting the waiver is a responsibility of the agency head.

Where To Obtain Copies. Copies of this publication are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161. When ordering, refer to Federal Information Processing Standards Publication 52 (NBS-FIPS-PUB-52), and title. Payment may be made by check, money order, or deposit account.