

FEDERAL STANDARD

TELECOMMUNICATIONS: SYNCHRONOUS HIGH SPEED
DATA SIGNALING RATES BETWEEN DATA TERMINAL EQUIPMENT
AND DATA COMMUNICATION EQUIPMENT

This standard is issued by the General Services Administration pursuant to the Federal Property and Administrative Services Act of 1949, as amended, Public Law 89-306 (40 U.S.C. 759 et seq.), and as implemented by Ex. Order No. 11717, May 9, 1973, 38 F.R. 12315 (1973). This standard has also been published as an integral part of Federal Information Processing Standards (FIPS) Publication 37 dated June 15, 1975, and its application to both data processing systems and telecommunication systems is mandatory on all Federal agencies.

1. Purpose. The purpose of this standard is to facilitate interoperability between telecommunication facilities and systems of the Federal Government and compatibility of these facilities and systems at the computer-communications interface with data processing equipment (systems) of the Federal Government.

2. Scope. This standard establishes signaling rate requirements for data terminal and data processing equipment which is both (1) employed with synchronous data communication equipment and (2) designed to operate on binary encoded information over wideband communication channels having greater bandwidth than the nominal 4 kHz bandwidth commonly used in analog voice transmission. It does not specify any coding or format restrictions which may be imposed by the telecommunications system on the binary encoded information emerging from the data terminal or data processing equipment.

3. Application. This standard shall be used by all agencies of the Federal Government. It is not intended to hasten the obsolescence of equipment currently existing in the Federal inventory; it shall be used in the planning, design, and procurement, including lease and purchase, of all new data communication systems.

4. Applicable documents. The following document forms a part of this standard to the extent specified herein:

American National Standards Institute (ANSI) Standard:

X3.36-1975 - Synchronous High Speed Data Signaling Rates Between Data Terminal Equipment and Data Communication Equipment

(Applications for copies shall be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. Federal agencies may also obtain copies with FIPS Publication 37 by applying for that document to General Services Administration, Specifications Sales (3FRSBS), Building 197, Washington Navy Yard Annex, Washington, D.C. 20407.)

5. Requirements.

5.1 General. Signaling rates used for exchange of data between data terminal and data communication equipment where the data communication equipment is utilizing wideband communication channels (greater than 4 kHz bandwidth) shall be in accordance with ANSI Standard X3.36-1975 with the following exceptions:

- a. The note alluding to certain unspecified coding restrictions on the data streams of users operating at 1544 kbit/s is not applicable.
- b. A signaling rate of 64 kbit/s may also be utilized by Federal agencies having requirements to interface directly with point-to-point transmission facilities of foreign communications carriers.

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5.2 Rate tolerance. The signaling rates specified are nominal. The bit rate tolerance shall be consistent with the operational environment in which applied to ensure maintenance of end-to-end synchronism provided that such tolerance complies with other Federal Standards which deal with signal quality and synchronization.

6. Changes. When a Federal agency considers that this standard does not provide for its essential needs, a statement citing inadequacies shall be sent in duplicate to the General Services Administration, Federal Supply Service, Office of Standards and Quality Control, Washington, D.C. 20406, in accordance with provisions of Federal Property Management Regulations 41 C.F.R. 101-29.3. The General Services Administration will determine the appropriate action to be taken and will notify the agency.

7. Conflict with referenced documents. Where the requirements stated in this standard conflict with any requirements in a referenced document, the requirements of this standard shall apply. The nature of the conflict between this standard and a referenced document shall be submitted in duplicate to the General Services Administration, Federal Supply Service, Office of Standards and Quality Control, Washington, D. C. 20406.

8. Notes. Federal Government activities may obtain copies of this standard or other Federal Specifications, Standards, and Handbooks at established distribution points in their agencies. Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402. Purchase orders for copies of this standard should be submitted to the General Services Administration, Specifications Sales (3FRSBS), Building 197, Washington Navy Yard Annex, Washington, D.C. 20407. Price 25 cents each.

MILITARY INTERESTS:

CIVIL AGENCY COORDINATING
ACTIVITIES:

In view of the special nature of this standard, records of coordination with all affected Federal agencies are maintained by the preparing activity.

PREPARING ACTIVITY:

Office of the Manager
National Communications
System (NCS-TS)
Washington, D.C. 20305