

DATASPEED TAPE-TO-TAPE SYSTEM

TYPE 5

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2. DESCRIPTION	1	2.01 The Type 5 Tape-to-Tape System provides 75 character per second data communication using either private lines or the switched telephone network. Station arrangements permit data transmission, reception, or both. Systems may be arranged for point-to-point data exchange, for data gathering (many Senders with few Receivers) or for data distribution (few Senders to many Receivers). Stations may also be used at outlying points, exchanging data with a central on-line computer.
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1. INTRODUCTION		2.03 Fundamentally, these systems operate in the following manner. Punched paper tape, in five, six, seven, or eight level format is placed in the tape reader at the Sender. The perforations in the tape are converted to parallel dc pulsing by the reader and applied to the transmitter circuit which lengthens each pulse to the required character width. The pulses are then routed from the Sender circuits to a data set 402C where they are converted to audio tone signals and applied to the carrier lines. The tone signals are received at the Tape Receiver site, converted from tone to dc pulsing by a Bell System data set 402D, amplified, and used to drive the tape punch unit within the Tape Receiver.
1.01 This section describes, in a general way, the DATASPEED service, Type 5, the Tape Senders, Tape Receivers, and data sets which comprise the input and output terminals. More extensive coverage of these individual units is contained in related groups of sections.		2.04 It is also possible to connect a Tape Sender and Tape Receiver, at a particular site, to a common telephone line. This

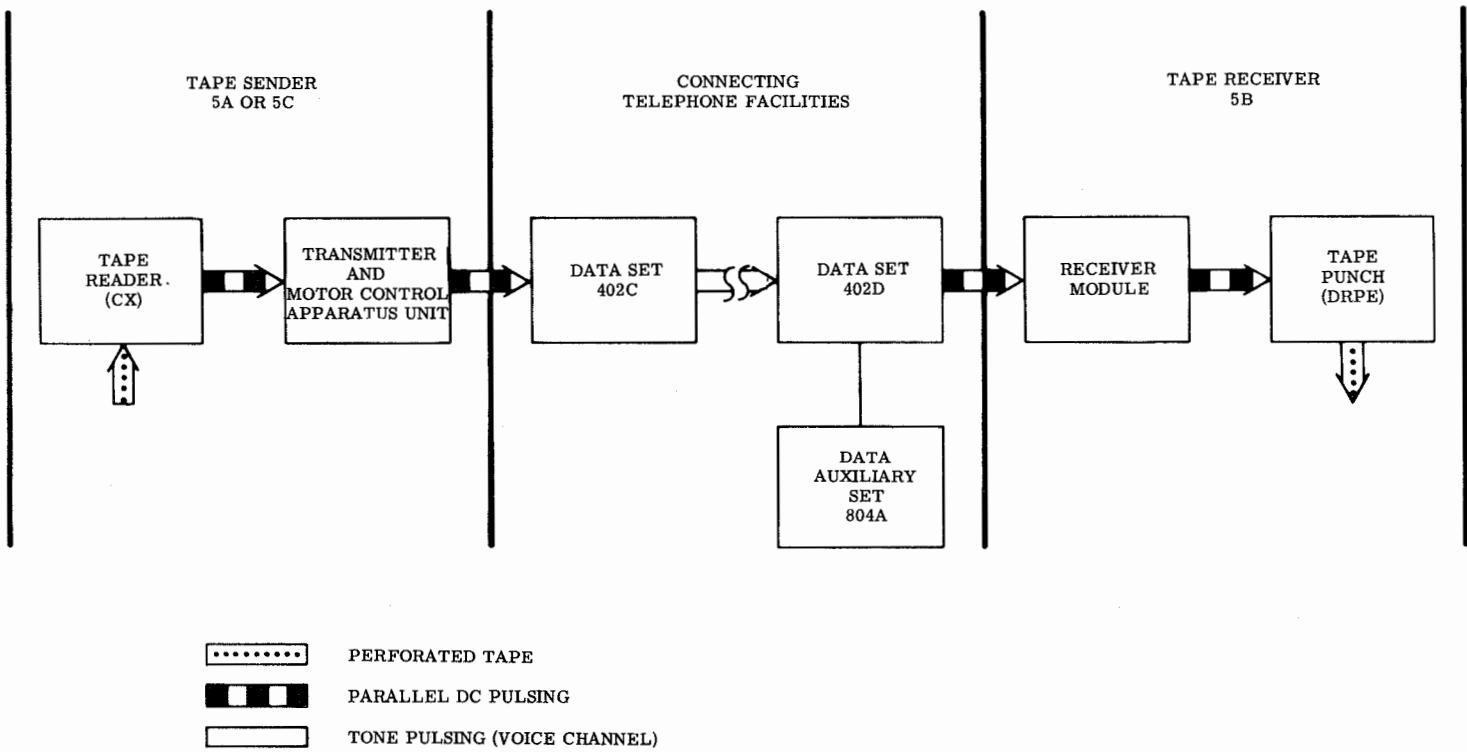


Figure 1 - System Block Diagram

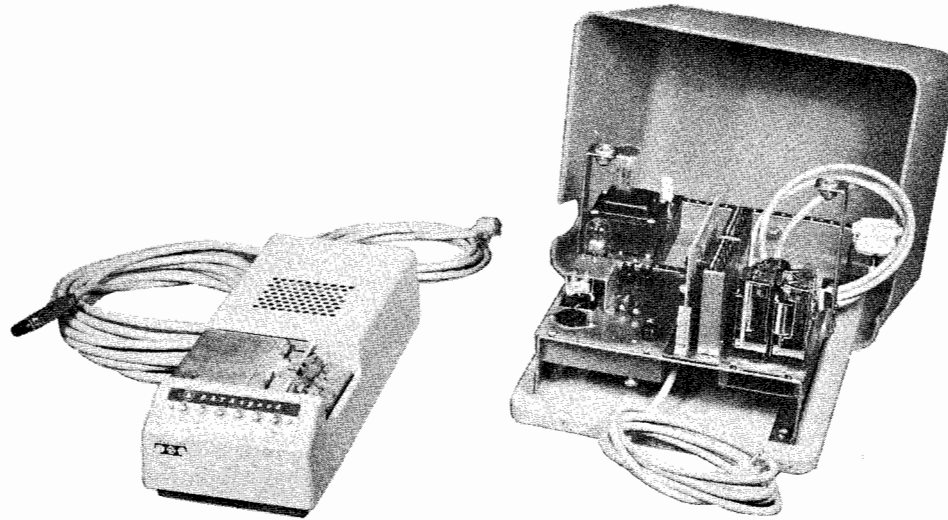


Figure 2 - Tape Sender 5A

arrangement constitutes a "send-receive" station. When operated in this manner, the data auxiliary set 804A, normally mounted in the Tape Receiver, is not required.

TAPE SENDERS 5A AND 5C

A. Tape Sender 5A (Figure 2)

2.05 Tape Sender 5A comprises a table mounted tape reader and a wall mounted apparatus box assembly. A table mounted data set 402C completes the terminal equipment. The data set must be located within 6 feet of the control unit. The tape reader is usually placed beside the data set on the same desk or table, but may be located anywhere within 50 feet of the wall mounted apparatus box. In normal operation, the tape reader requires no operator attention once the tape is loaded.

B. Tape Sender 5C (Figure 3)

2.06 Tape Sender 5C is a floor mounted version of the 5A Sender. Tape spooling facilities enable the 5C to handle larger traffic volumes than the table mounted set. The tape reader, apparatus unit, and companion data set 402C are mounted directly in the upright cabinet. The 5C Sender will handle an 800 foot spool of fully perforated tape.

TAPE RECEIVER 5B (Figure 4)

2.07 Tape Receiver 5B comprises a tape punch set and receiver module in a floor mounted cabinet. Space is provided for a data set 402D and data auxiliary set 804A. Tape spooling facilities will handle a 3000 foot tape supply reel and an 800 foot take-up reel. Tape feed-out switches permit the operator to feed out blank tape (feed-out holes only perforated)

or tape which is perforated in all levels. A signal lamp advises the operator when the tape supply runs low. The tape punch is of a new design, affording high speed performance and high reliability.

DATA SETS

2.08 The data set 402C, at the Tape Sender converts the dc pulsing from the sender to audio tone signalling for application to the carrier lines. The data set 402D converts the incoming audio tones to the parallel dc pulses necessary to drive the Tape Receiver. Control switches on the data set 402C and data auxiliary set 804A select the data set mode of operation (TALK, TEST, DATA, etc). The 402C and 804A also provide the dialing and voice facility.

3. OPTIONAL FEATURES

TAPE SENDERS 5A AND 5C

A. Circuit Assurance and Break Option

3.01 The circuit assurance and break option is built into all Senders, requiring only the removal of a jumper. This option will shut down the Sender automatically if a line break occurs. It will also permit the Receiver operator to stop the Sender should it be necessary to do so. In either of these instances, a signal lamp at the Sender will light. In addition, an auxiliary signal circuit is available to provide an audible signal or to control the reader.

B. TP198002 Recognizer Apparatus Unit Option

3.02 The TP198002 recognizer option enables an unattended Tape Sender to respond to a call from a Receiver automatically. This

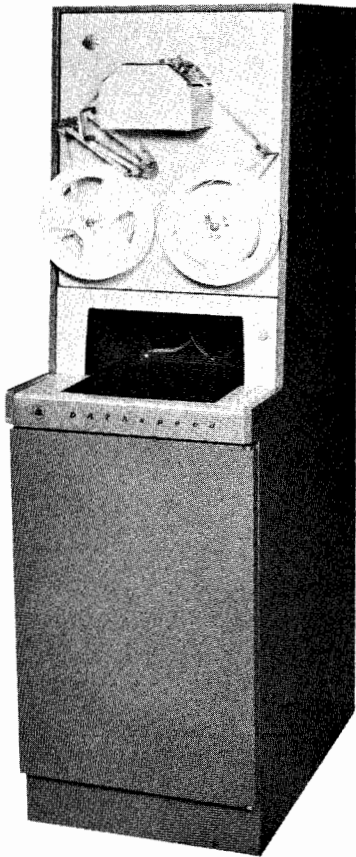


Figure 3 - Tape Sender 5C

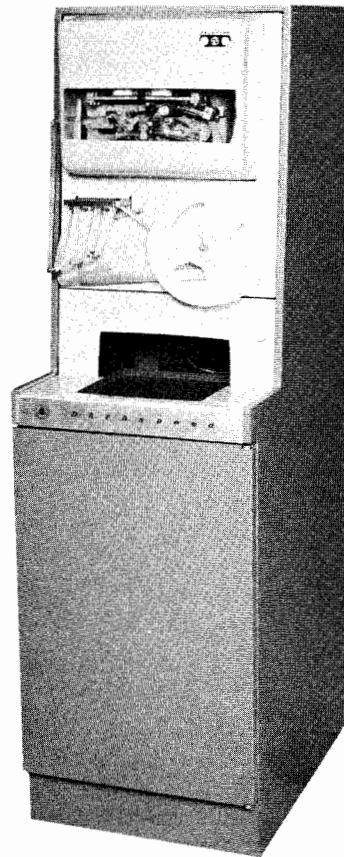


Figure 4 - Tape Receiver 5B

feature provides a recognizer circuit which will cause the Sender to transmit only in response to a coded signal. In this way, data will be transmitted only to authorized Receivers.

C. TP198021 and TP199543 Cable Options

3.03 Tape Sender 5A is normally equipped with a 10 foot power cable, and a 10 foot apparatus unit cable. Where it is necessary to place the tape reader farther away from the apparatus box assembly, a 25 foot TP198021 apparatus unit cable, and 25 foot TP199543 three-wire power cable are available as options.

TAPE RECEIVER 5B

A. Unattended Answering Option

3.04 The unattended answering option is built into all Receivers, requiring only the connection of a wire. When so connected and the

AUTO ANSWER switch is in the AUTO position the Receiver will accept data on an unattended basis.

B. Receive-Only Hunting Group Option

3.05 This option is built into the Receiver, requiring only the proper jumper connection. It permits Tape Receiver service as part of a receive-only rotary hunting group.

C. The TP199784 Station Identifier Apparatus Unit Option

3.06 The TP199784 station identifier is essentially a code signal generator. Installed in the Tape Receiver, the circuit enables the Receiver to generate a discrete identification signal. This signal will automatically start those Tape Senders which have a similarly coded recognizer circuit. The combination of a station identifier at the Receiver and a recog-

nizer at the Sender, thus prevents an unattended Sender from responding to a "wrong number" or unauthorized caller.

D. TP199633 Blank Panel

3.07 When a Sender and Receiver are connected as a send-receive station (Paragraph 2.04) the data auxiliary set 804A, normally mounted in the Receiver is not required. The TP199633 blank panel can then be installed in place of the TP149782 control panel, and the TP149783 cover panels which accommodate the data auxiliary set in the standard Receiver. The replacement panel has no opening for the data auxiliary set.

E. TP199788 Unattended Send-Receive Apparatus Unit Option

3.08 When a Sender and Receiver are connected as a send-receive station (Paragraph 2.04), the Receiver may be equipped with the TP199788 unattended send-receive option. When the Receiver is so equipped, and the Sender is equipped with the TP198002 recognizer apparatus unit (Paragraph 3.02), a calling station may direct the send-receive station to send or receive at will. Note that a calling Receiver must have a properly coded TP199784 station identifier (Paragraph 3.06) to activate the Sender at a send-receive station.