

DATASPEED
TAPE TO TAPE SYSTEM

TAPE REPERFORATOR

TAPE READER

202A DATA SET

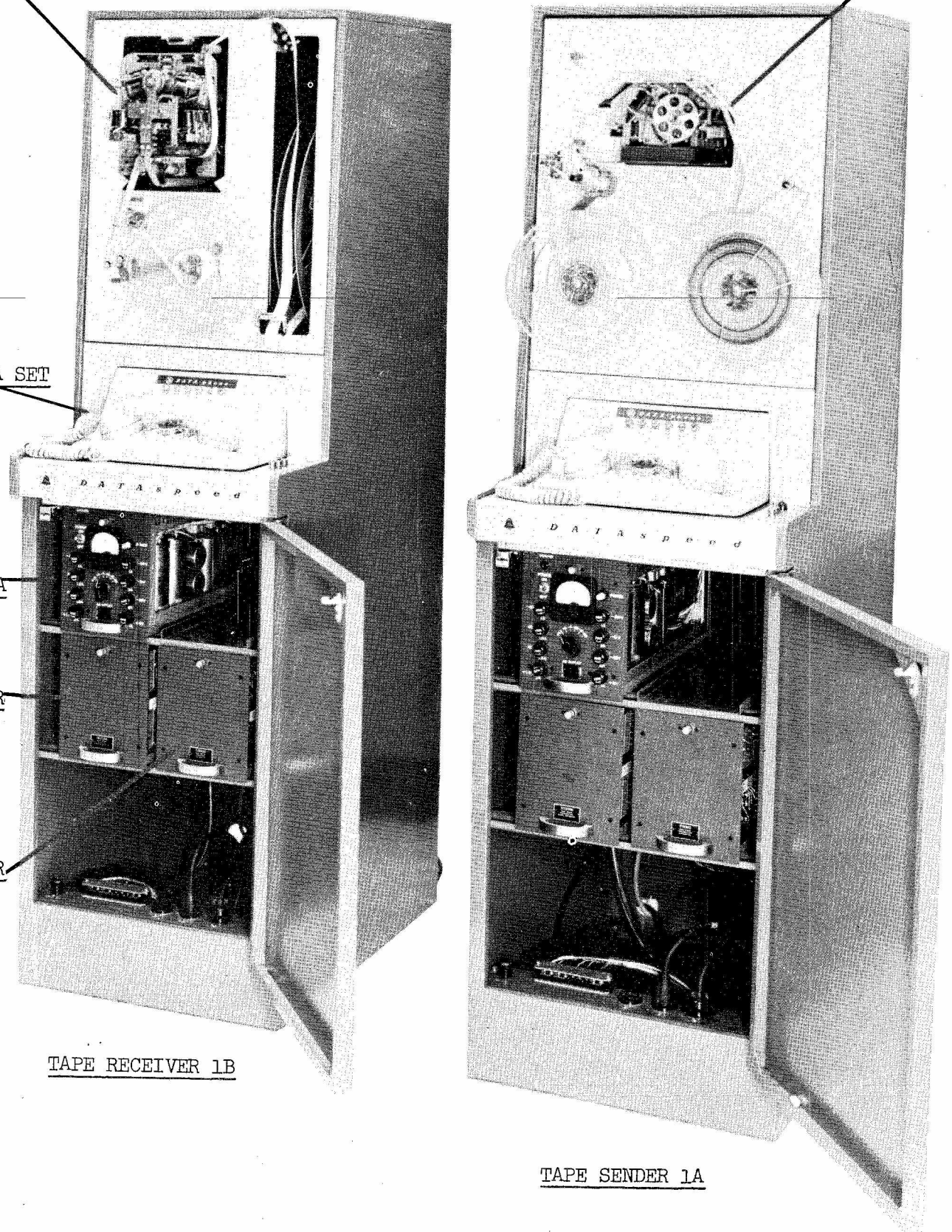
POWER
SUPPLY 1A

SIGNAL
CONVERTER

DISTRIBUTOR

TAPE RECEIVER 1B

TAPE SENDER 1A



DATASPEED
TAPE TO TAPE SYSTEM

GENERAL DESCRIPTION

DATASPEED service provides for the transmission of data from 5 through 8 level paper tape over 2-wire telephone grade channels at a rate of 1050 words per minute. It may be provided via DATAPHONE or Private Line data service. Normal voice communication also is possible.

DATASPEED equipment necessary for tape-to-tape operation consists of a DATASPEED tape sender and tape receiver in conjunction with a 202A data set. Through the use of a Y connector one 202A data set, which is a combined modulator and demodulator, may be connected to a tape sender and receiver pair at multiple installations. A blank panel is provided with the Y connector to cover the data set opening left in the other unit.

A DATASPEED Tape Sender consists of a sender cabinet, a tape reader, a sending distributor, a signal converter, and a power supply. A DATASPEED Tape Receiver consists of a receiver cabinet, a tape reperformator, a receiving distributor, a signal converter and a power supply.

Dimensions of a Sender or Receiver are 16 inches wide, 54 1/4 inches high and 23 1/4 inches deep.

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DATASPEED TAPE SENDER 1A

The DATASPEED Tape Sender 1A is used in conjunction with a 202A data set for converting 5 level prepunched tape to voice frequency tones. These tones are transmitted over a telephone circuit to be received by a DATASPEED Tape Receiver 1B.

The DATASPEED Tape Sender 1A consists of the following:

DATASPEED SENDER CABINET 1A - This cabinet is designed to house the equipment used in the DATASPEED Sender. The top panel of the cabinet, on which is mounted the tape reader, two tape reels and features for control of the tape path through the reader, slides forward for access to internal features. Immediately below the top panel is a cutout and shelf on which the 202A data set is mounted. On the shelf, to the right of the data set, is located the DATASPEED controls which provide non-locking pushbuttons for winder and reader control, indicator lights for ac power and line break and a toggle switch for automatic or manual controls.

The lower compartment of the cabinet houses three modules contained in 5 1/2 x 7 x 15 inch steel frames which slide out for easy access to components. The cabinet is normally provided in two-tone gray color but other two-tone colors may be acquired when necessary.

Wiring is in accordance with Teletype drawing WD4701.

For additional information see BSP's 592-210-403, 592-210-706, and 592-210-707.

DATASPEED TAPE READER 1A - This is an electromechanical device that provides multiwire parallel output corresponding to the 5 unit code perforated in a tape.

The complete reader consists of the reading portion which projects from the top panel of the cabinet, a cover, and a motor unit (MU43) and set of gears which are mounted on the cabinet side of the panel.

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DATASPEED TAPE SENDER 1A

DATASPEED TAPE READER 1A (Cont'd)

Features of the reader include a "Run-Stop-Free" switch, a tight-tape switch, a tape out switch, adjustable tape guides for 11/16" to 1" tape, an operating magnet which starts or stops tape feeding instantly, a pulse generator utilizing a permanent magnet imbedded in the flywheel for accurate synchronization, code contacts which "read out" information over a parallel wire signal path and a pair of auxiliary contacts. By addition of tape sensing pins the reader can be adapted for codes up to 8 units. Wiring is terminated at a 36 terminal plug.

Wiring is in accordance with Teletype drawing WD5072.

For additional information see BSP's 592-210-101, 592-210-403, 592-210-700, 592-210-701 and 592-210-702.

DATASPEED SENDING DISTRIBUTOR 1A - The signals coming from the tape reader are in parallel. The distributor receives these parallel signals after they are reshaped by the signal converter and converts them into serial form. These serial signals are then sent back through the signal converter to the data set. The electronic circuitry is on plug-in circuit cards and sits in the lower compartment of the cabinet. Test points for voltmeter and oscilloscope tests are provided.

Wiring is in accordance with Teletype drawings WD4438 and WD4439.

For additional information see BSP's 592-210-400 and 592-210-401.

DATASPEED SIGNAL CONVERTER 1A - The signal converter receives the 5 level parallel signals from the tape reader and converts the input to 5 standard output pulses. This output is fed to the sending distributor. The signal converter also converts the signals received from the sending distributor to signals suitable for driving the modulator of a 202A data set.

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DATASPEED TAPE SENDER 1A

DATASPEED SIGNAL CONVERTER 1A (Cont'd)

The electronics circuitry is on plug-in circuit cards and sits in the lower compartment of the cabinet. Test points for voltmeter and oscilloscope tests are provided.

Wiring is in accordance with Teletype drawings WD3835 and WD3831.

For additional information see BSP's 592-210-400 and 592-210-401.

DATASPEED POWER SUPPLY 1A - Power for the electronic circuitry in both the Tape Sender and Tape Receiver is provided by this supply mounted in a frame approximately 5" wide, 7" high and 15" deep located in the lower section of the cabinet.

The supply converts 117V, 60 cycle ac power to -12V at 1.6 amp, +1.5V at 1 amp, +6V at .5 amp, -6V at .5 amp, -6 reverse volts at -.5 amp, and a "floating" 28V at 4 amp. Mounted on a rear panel are a three-pin ac input power connector and a multiple-pin output connector. The front panel contains a voltmeter and rotary switch for selecting the voltages to be measured, an on-off two pole power switch, an ac convenience output, an amber power on lamp, eight fuses for protecting the ac and dc circuits and a signal ground jack. Five spare fuses and screwdriver adjustments for the -12, +6 and +1.5 voltages are on the top of the power supply.

Wiring is in accordance with Teletype drawings WD5531 and WD5537.

For additional information see BSP's 592-210-400 and 592-210-402.

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DATASPEED TAPE RECEIVER 1B

The DATASPEED Tape Receiver 1B is used in conjunction with a 202A data set for converting voice frequency tones originated by a DATASPEED Tape Sender 1A to 5 level punched tape. It is equipped with Automatic Answer which will allow the set to go on automatically without an attendant operating it. See BSP 592-210-100.

The DATASPEED Tape Receiver 1B consists of the following:

DATASPEED RECEIVER CABINET 1B - This cabinet is designed to house the equipment used in the DATASPEED Receiver. The top panel of the cabinet mounts the tape reperfocator, a tape reel and features for control of the tape path through the reperfocator. A cutout on the right side of the cabinet provides access to and exit from a tape reel which can provide up to 3000 feet of tape for punching. The top panel slides forward for access to internal features.

Immediately below the top panel is a cutout and shelf in which the 202A data set is mounted. On the shelf, to the right of the data set, is located the DATASPEED controls which provide nonlocking pushbuttons for winder, reperfocator and tape feed out and indicator lights for ac power and low tape.

The lower compartment of the cabinet houses three modules contained in 5 1/2 x 7 x 15 inch steel frames which slide out for easy access to compartments. The cabinet is normally provided in two-tone gray color but other two-tone colors may be acquired when necessary.

Wiring is in accordance with Teletype drawings WD4702 and WD4773.

For additional information see BSP's 592-210-404, 592-210-706 and 592-210-707.

DATASPEED TAPE REPERFORATOR 1B - This is an electromechanical device that fully perforates a 5 unit code in a tape from parallel combinations of electrical code pulses. It produces synchronizing pulses through use of a permanent magnet insert in the flywheel and does not necessarily

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DATASPEED TAPE RECEIVER 1B

DATASPEED TAPE REPERFORATOR 1B (Cont'd)

perforate a character for each operation. Designed for 108 operation per second, the reperforator will operate on intermittent bursts of characters at the rate of 108 per second. The reperforator will therefore run idle part of the time if 6480 operations per minute are not provided. Perforation of characters at various speeds up to operating speed may be performed. The reperforator is usually run at speeds slightly faster than the DATASPEED Sender.

The complete reperforator consists of the perforating portion which projects from the top panel of the cabinet, a cover, a synchronous motor unit and set of gears, and a suction pump driven by the motor which draws the chad from the tape through a tube and deposits it in a chad container sitting on a shelf on the cabinet side of the panel. The reperforator includes six code magnets (5 for the code and 1 for the feed hole).

Wiring is in accordance with Teletype drawing WD4497.

For additional information see BSP's 592-210-102, 592-210-404, 592-210-703, 592-210-704 and 592-210-705.

DATASPEED RECEIVING DISTRIBUTOR 1B - The function of this module is to receive the 5 unit telegraph codes after they are reshaped by the signal converter, and convert them into parallel form. These parallel signals are then sent back to the signal converter.

The electronic circuitry is on plug-in circuit cards and sits in the lower compartment of the cabinet. Test points for voltmeter and oscilloscope tests are provided.

Wiring is in accordance with Teletype drawings WD4440 and WD4441.

For additional information see BSP's 593-310-400 and 592-210-401.

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DATASPEED TAPE RECEIVER 1B

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DATASPEED SIGNAL CONVERTER 1B - The function of this module is to reshape the 5 level telegraph code before sending it to the receiving distributor and to accept the parallel signals from the distributor for conversion to signals suitable for driving the reperforator.

The electronics circuitry is on plug-in circuit cards and sits in the lower compartment of the cabinet. Test points for voltmeter and oscilloscope tests are provided.

Wiring is in accordance with Teletype drawings WD3837 and WD3833.

For additional information see BSP's 592-210-400 and 592-210-401.

DATASPEED POWER SUPPLY 1A - See Description under DATASPEED Sender 1A.

DATASPEED
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DATASPEED TAPE SENDER 2A

The DATASPEED Tape Sender 2A consists of the DATASPEED Tape Reader 2A, DATASPEED Sender Cabinet 2A, DATASPEED Sending Distributor 2A, DATASPEED Signal Converter 2A, and DATASPEED Power Supply 1A. This set is the same as the DATASPEED Tape Sender 1A except that it is provided with the features and circuitry required for sending 5 to 8 unit tape utilizing a 10 element code. The tape required for this set is 11/16 inch tape for 5 unit code or 1 inch tape for 6, 7 or 8 unit code.

DATASPEED TAPE RECEIVER 2B

The DATASPEED Tape Receiver 2B consists of the DATASPEED Tape Reperforator 2B, DATASPEED Receiver Cabinet 2B, DATASPEED Receiving Distributor 2A, DATASPEED Signal Converter 2B, and DATASPEED Power Supply 1A. This set is the same as the DATASPEED Tape Sender 1B except that it is provided with the features and circuitry required for receiving 5 to 8 unit code. The tape required for this set is 11/16 inch tape for 5 unit code or 1 inch tape for 6, 7 or 8 unit code.

END OF SECTION