

DATA AUXILIARY SET 803A1 AND 803A2 LINE AND TEST CIRCUIT

IDENTIFICATION AND OPERATION

1. GENERAL

1.01 Data auxiliary sets 803A1 and 803A2 line and test circuit (Fig. 1) are designed for use with data set 301B.

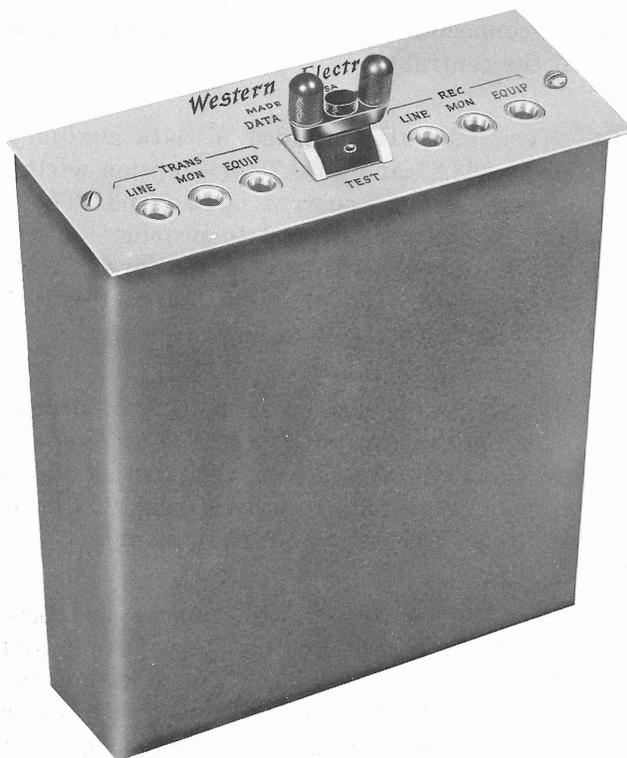


Fig. 1 — Data Auxiliary Sets 803A1, and 803A2, Front View

- 1.02 This section is reissued to include information for data auxiliary set 803A2.
- 1.03 Installation and connections for data auxiliary sets 803A1 and 803A2 are shown in the sections covering data set 301B.
- 1.04 The line-test key, in its normal line (unoperated) position, connects data set 301B, to the transmission line on a full duplex basis.

1.05 When operated to the TEST position, the line-test key connects the send and receive sides of the transmission line together on a loop-back basis. The transmit and receive leads of data set 301B are connected together through an attenuator. (The attenuator is used only in data auxiliary set 803A1.) This arrangement permits the customer to make test transmissions through the data set on a back-to-back basis to determine if trouble conditions are located in the station equipment or on the transmission line. However, only certain business machines have the capability of sending to themselves for back-to-back tests.



Two data auxiliary sets 803A2 in the same installation should not be used in TEST position at the same time. A "singing" condition may result.

1.06 Monitor and test jacks are provided in data auxiliary sets 803A1 and 803A2 to facilitate testing by maintenance personnel.

2. IDENTIFICATION

2.01 Data auxiliary sets 803A1 and 803A2 consist of a 2-position, locking, lever-type key (577A) which conditions the set for LINE or TEST operation. A locking device is provided to permit locking the key in either the LINE or TEST position.

2.02 Four 239A-type jacks are provided, two LINE jacks and two EQUIP (equipment) jacks, to permit testing the transmit and receive sides of the transmission circuit and the station equipment. Two MON (monitor) 238A-type jacks are also provided to permit monitoring either the transmit or receive sides of the circuit. No. 2 type signal plugs are provided in the jacks to prevent dust and dirt from collecting in the jacks when the set is mounted in a vertical position. These signal plugs must be removed to facilitate testing and replaced when testing has been completed.

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2.03 The line-test key and test jacks, along with the inductor and resistor components, are mounted in an apparatus box arranged for wall or desk mounting.

2.04 An equipment and wiring option is provided for use when "sealing current" is supplied at the central office on transmission facilities having nonsoldered splices.

2.05 A CPS 1 plug-in board is furnished with the data auxiliary set 803A2. This board may be used for 0 db (option X) or 10 db (option Y) loss to the transmitter output for the line signal power selection.

2.06 External connections to data auxiliary sets 803A1 and 803A2 includes local cabling to connect to the transmit and receive sides of the transmission line and the shielded line cord (W9A) provided with data set 301B. If shielding is required toward the transmission line, two 760A cables should be used in place of the local cabling. The 760A cables must be ordered separately. All connections to data auxiliary sets 803A1 and 803A2 terminate on a screw-type terminal strip. All shields are connected together in data auxiliary set 803A1. In data auxiliary set 803A2 when shielded cable is not used for 4-wire line, terminal 8 must be connected to terminal 9. Then all shields are connected together. When shielded cable is used, terminal 8 should not be connected to terminal 9. Then all shields are not connected together. Refer to SD-1D059-01.

2.07 Fig. 2 shows the interior and equipment components of data auxiliary sets 803A1 and 803A2.

3. OPERATION

3.01 For a detailed description of data auxiliary set 803A1 operation, refer to CD- and SD-1D036-01. For data auxiliary set 803A2 see CD- and SD-1D059-01.

3.02 With the line-test key in the LINE condition, data set 301B transmitting and receiving sides are connected to the transmit and receive sides of the transmission line.

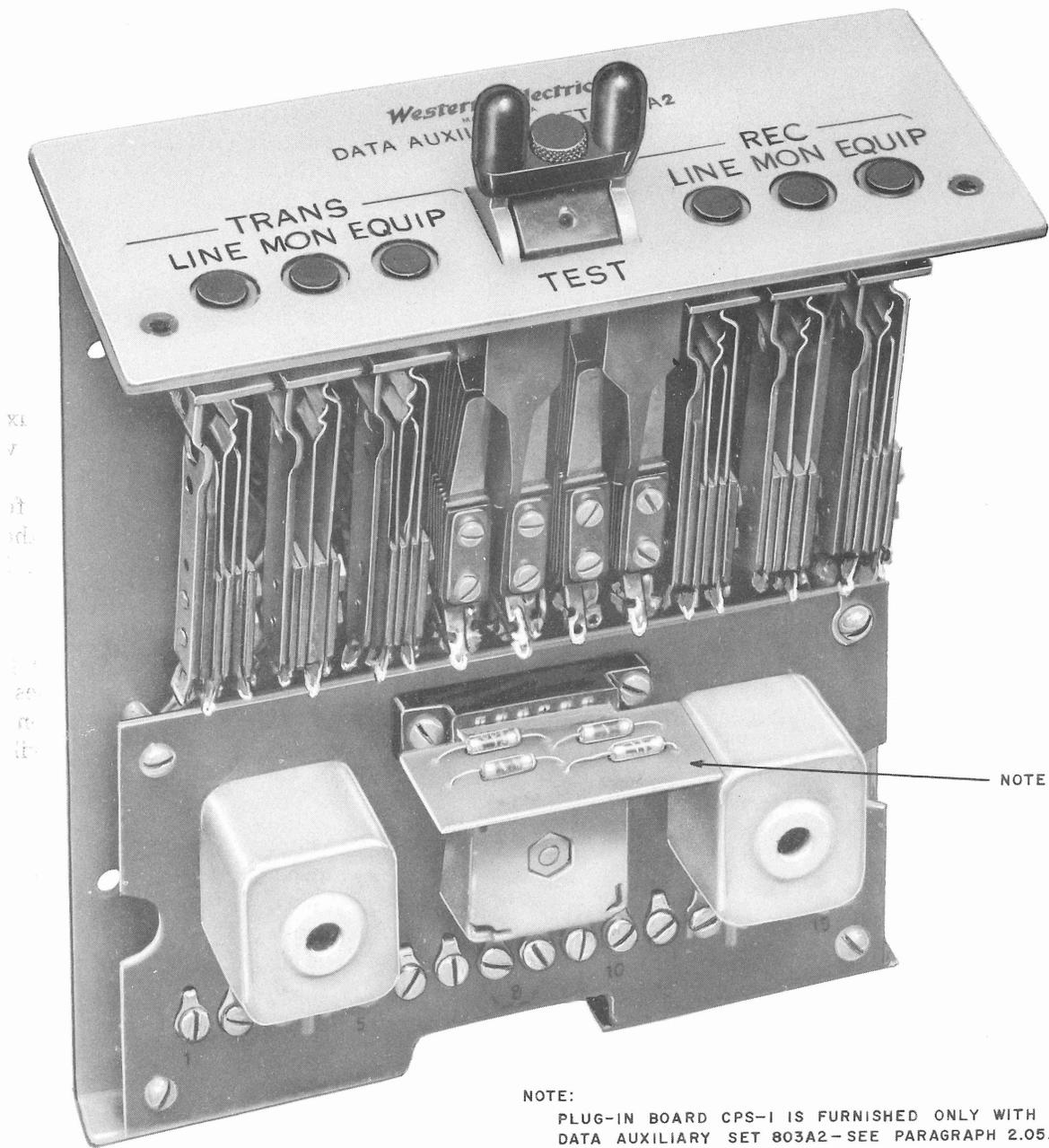
3.03 With the line-test key operated to the TEST position, the transmit side of data set 301B is connected to its receive side through an attenuator. (The attenuator is used only in data auxiliary set 803A1.) The 1T1 interface lead to data set 301B is grounded to furnish an off signal to the customer's business machine to indicate a test is in progress. The send and receive sides of the transmission line are disconnected from data set 301B and are connected together on a loop-back basis toward the central office.

3.04 Terminals are provided in data auxiliary sets 803A1 and 803A2 for Z option wiring for use when sealing current is required. These terminals are to be strapped to provide for the simplex circuit arrangement required for the sealing current path. When sealing current is not used, no Z option strap is to be installed.

3.05 LINE test jacks are provided to permit testing the transmit and receive sides of the transmission line, regardless of the position of the line-test key. Connection to these jacks will open the circuit toward the station equipment.

3.06 EQUIP (equipment) test jacks are provided to permit testing the transmit and receive sides of data set 301B regardless of the position of the line-test key. Connection to these jacks will open the circuit toward the transmission line.

3.07 MON (monitor) jacks are provided to permit monitoring either the transmit or receive sides of the circuit. Connection to these jacks will not open the circuit toward either the transmission line or data set 301B.



NOTE:
PLUG-IN BOARD CPS-1 IS FURNISHED ONLY WITH
DATA AUXILIARY SET 803A2—SEE PARAGRAPH 2.05.

Fig. 2 — Data Auxiliary Sets 803A1, and 803A2, Interior View