

4B1 DATA UNIT DESCRIPTION AND OPERATION

1. GENERAL

1.01 This section contains information needed for the understanding of the function and operation of the 4B1 Data Unit (Fig. 1).

1.02 The 4B1 Data Unit provides the apparatus necessary to connect a 4-wire telephone line to a Data Set 205B-type and the mechanism required to switch the data set into the local or remote test modes.

2. DESCRIPTION

2.01 For a detailed description of the unit and the circuits contained therein refer to CD and SD 1D086-01.

2.02 The 4B1 Data Unit is a bracket mounted 3-position line-test key assembly located in the upper left-hand corner of the data set. The unit is mounted so that the switch handle moves in a vertical direction.

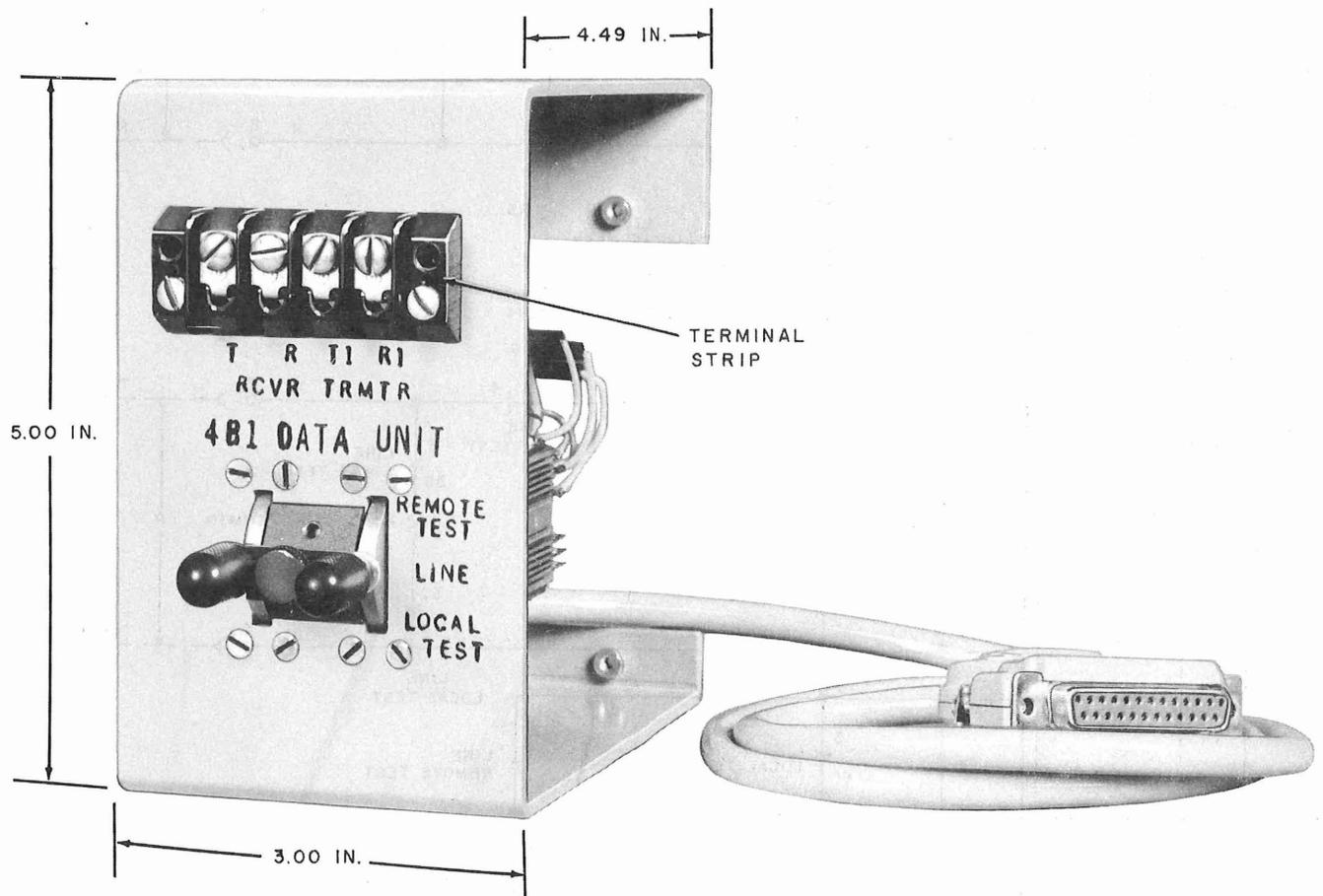


Fig. 1 — 4B1 Data Unit

2.03 The 4B1 Data Unit consists of a bracket assembly, cord assembly, 3-position key assembly, terminal and fanning strips, and 5 resistors.

3. OPERATION

3.01 The 4-wire telephone line connects to a screw type terminal strip on the front of unit. Connection to the data set is made with a 10-conductor cord assembly equipped with a 25-pin connector which is plugged into the data set.

3.02 By placing the 3-position line-test key in the LINE position, the 4-wire telephone line is connected through the unit to the data set (i.e., DT to T, DR to R, DT1 to T1, and DR1 to R1) (Fig. 2).

3.03 With the line-test key in the LOCAL TEST position, the data unit is in the local test mode. The telephone lines are isolated from the data set transmit-receive pairs (i.e., DT, DR and DT1, DR1) and each telephone line pair (i.e., T, R and T1, R1) is terminated with a 600-ohm resistor, R1 and R5 respectively. The

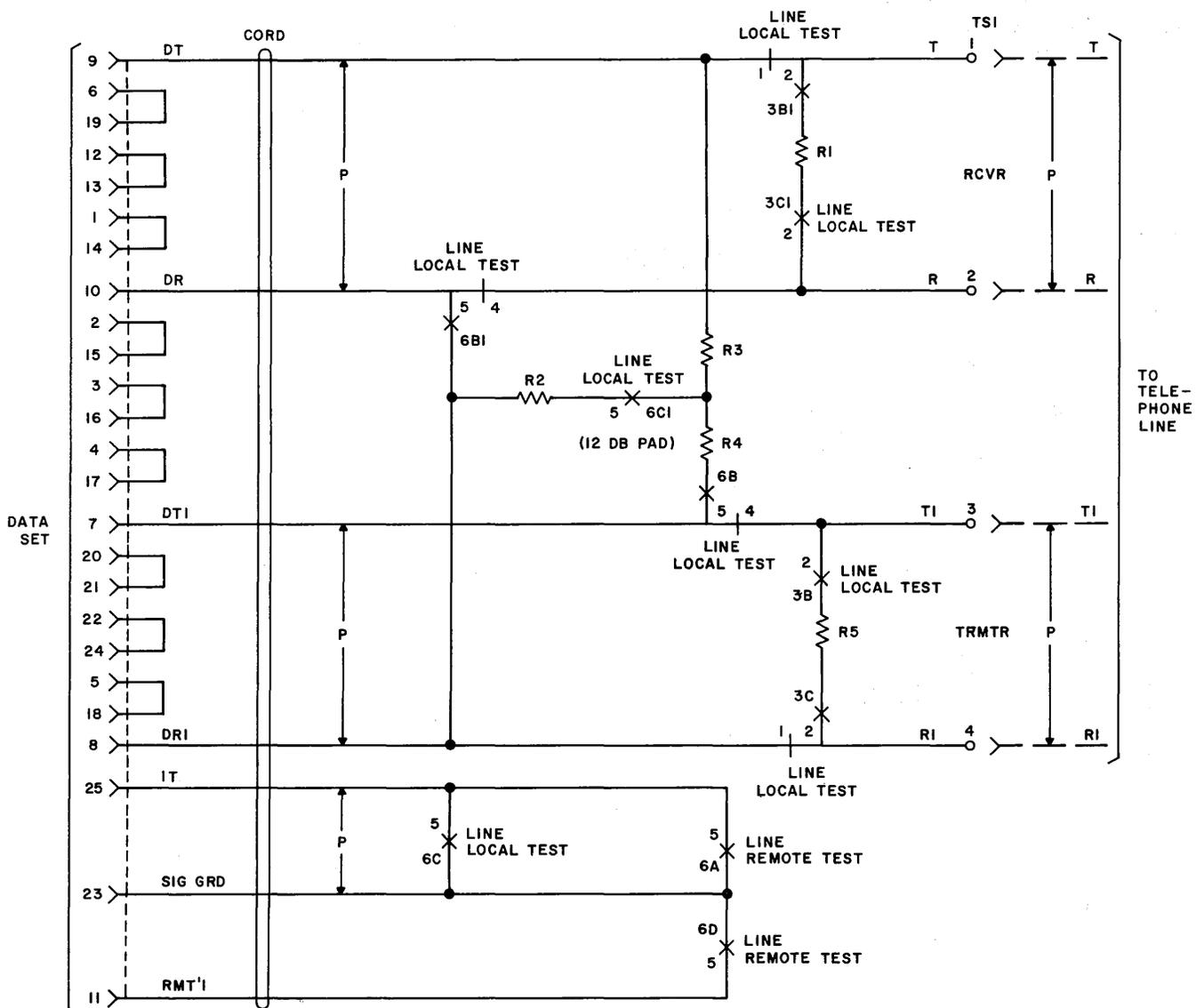


Fig. 2 — 4B1 Data Unit, Simplified Schematic

data set transmit pair is connected to the data set receive pair through a 12 db attenuator made up of 3 resistors, R2, R3, and R4. The Signal-Ground (SIG-GRD) is connected to the Interlock Lead (IT). This causes the data set to generate a signal which indicates to the business machine that the data set is NOT ready to accept data (local test mode).

3.04 When the line-test key is in the REMOTE TEST position, the data set is in the remote test mode. The 4-wire telephone line is connected through the data unit as described in the LINE position (3.02). In addition leads IT and RMT'1 are shorted to SIG-GRD. A ground on the RMT'1 lead places the data set in the re-

mote test mode. A ground on IT lead as described in 3.03, gives an indication to the customers equipment that the data set is not ready to accept data.

3.05 The straps which are provided in the cord assembly of the 4B1 control the 205B for either continuous or switched carrier operation by connecting the 4B1 cord into the appropriate 205B plug.

3.06 If the data set tests indicate trouble in the 4B1 Data Unit, look for broken wires, or other obvious trouble in the 4B1 Data Unit. Replace the 4B1 Data Unit if necessary.