

**DATA SET 103B**  
**TRANSMITTER-RECEIVER**  
**INSTALLATION AND CONNECTION**

**1. GENERAL**

**1.01** This section provides information for installation and connection of Data Set 103B when used as a data station. Information concerning the data terminal equipment (business machines) used with Data Set 103B is not included in this section.

**1.02** This section is reissued to revise transmission levels shown in Table D by providing additional strapping options.

**2. INSTALLATION**

**2.01** Data Set 103B is designed for desk or table top installation and use. Locate the data set so the cord from the business machine will reach the interface connector. This cord may be up to 50 feet long.

**2.02** The customer must furnish a 3-wire outlet (two parallel blades and a U-shaped grounding pin). The outlet should not be under control of a switch.

- To ensure that the data set and the business machine grounds are at the same potential, the data set should be served from the *same* ac service cabinet as the business machine. If this condition does not exist, a test using the 6A impulse counter should be made to detect noise. This test procedure is described in Section 591-015-500.

**2.03** The customer must provide and maintain a room temperature of 40° to 120°F for proper operation of the data set.

**2.04** Verify with the local test center that the loop facility has been tested and the transmission requirements specified in Section 314-410-500 have been met.

**3. CONNECTIONS**

**3.01** Connect inside wiring to a D25C-61 mounting cord at a connecting block as shown in Table A. Spare cord conductors should be connected to spare shown in Table A. Spare cord conductors should be connected to spare terminals or dressed back and taped.

**3.02** Service options shown in Tables B, C, and D should be specified on service order.

**3.03** The data set is factory-wired to provide a transmission level of 0 dBm on both channels. Levels may be changed by rearranging spade-tipped straps on TB1. Adjust the transmit level per service order or circuit layout card. See Table D.

**3.04** To match input-output characteristics of customer equipment, a factory-strapped connector (P-39C183 connector assembly) is placed over the proper male plug (Fig. 1 and Table C). Using a KS-6854 screwdriver, carefully tighten screw at each end of the assembly.

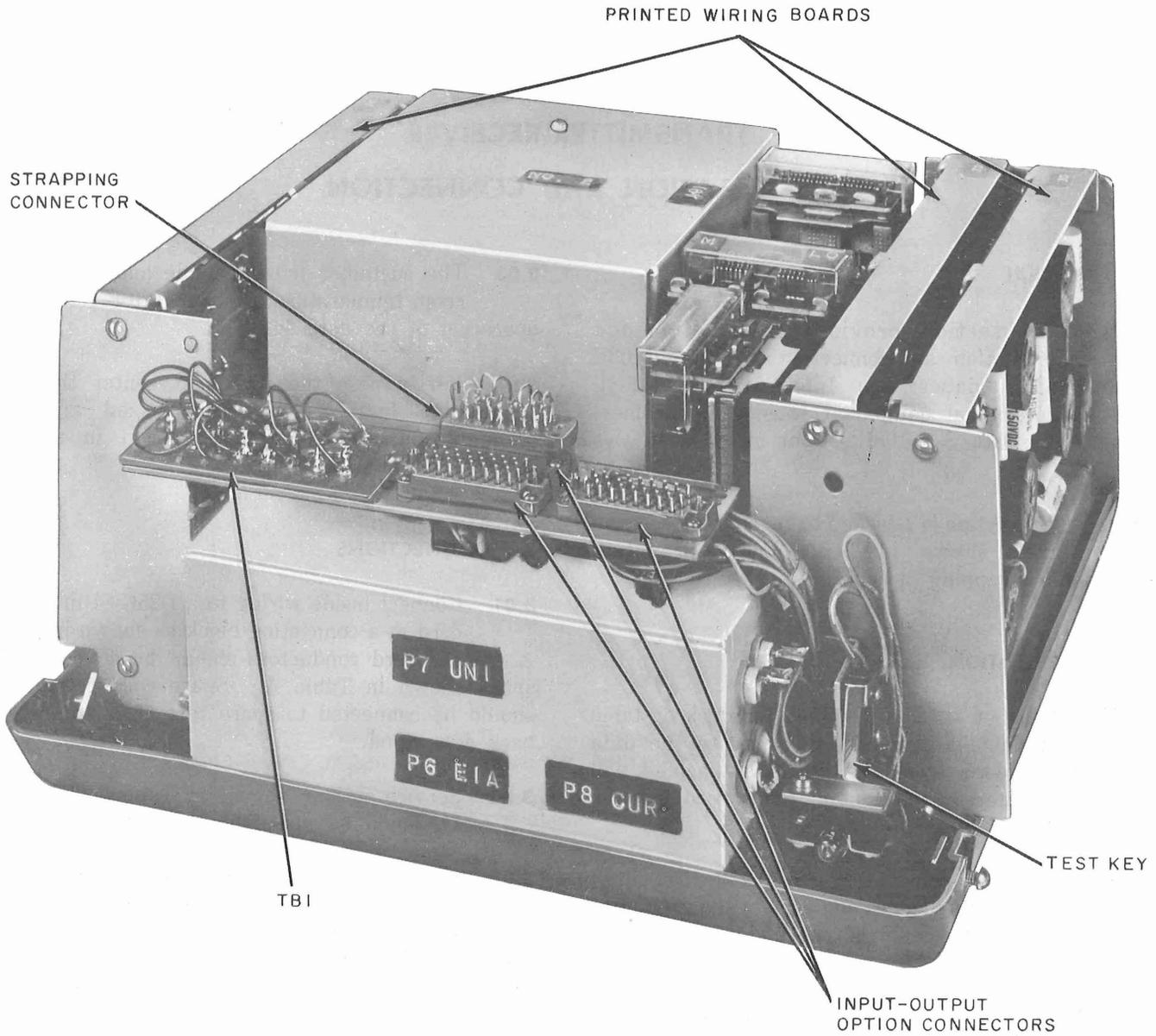


Fig. 1—Data Set 103B—Side View

TABLE A  
MOUNTING CORD CONNECTIONS

LEAD	44A CONNECTING BLOCK	CORD COLOR	KS-19087 L2 CONNECTOR TERMINAL
DT	4	O-W	3
DR	5	W-O	4

**TABLE B**  
**SERVICE OPTIONS**

OPTION	PROVIDE	STRAP CONNECTION TBI
Mark Hold Space Hold	1 Per Station	HD to MH HD to SH
Answering Mode Only	1 Per Station	MD to AN
Originating Mode Only, or Business Machine Control of Originating and Answering Mode		MD to OR

**TABLE C**  
**INPUT-OUTPUT OPTIONS**

BUSINESS MACHINE DATA SIGNAL	STRAPPING CONNECTOR PLACED ON
Bipolar Voltage Signal	P6-EIA
Negative Unipolar Voltage	P7-UNI
60 MA Current	P8-CUR

**TABLE D**  
**CONNECTIONS FOR TRANSMIT LEVELS**

TRANSMIT LEVELS DBM		TBI STRAP CONNECTIONS					
HIGH CHANNEL $f_2$	LOW CHANNEL $f_1$						
0	0	(1-2)	(3-4)	(5-6)	(7-8)	(9-10)	(11-12)
0	-2	(1-2)	(4-6)	(3-5)	(7-8)	(9-10)	(11-12)
0	-4	(1-2)	(4-10)	(3-9)	(5-6)	(7-8)	(11-12)
0	-6	(1-2)	(4-12)	(3-11)	(5-6)	(7-8)	(9-10)
0	-8	(1-2)	(4-6)	(5-12)	(3-11)	(7-8)	(9-10)
0	-10	(1-2)	(4-10)	(9-12)	(3-11)	(5-6)	(7-8)
0	-12	(1-2)	(4-6)	(5-10)	(9-12)	(3-11)	(7-8)
0	-14	(1-2)	(4-6)	(5-8)	(7-10)	(9-12)	(3-11)
-2	-2	(1-5)	(2-6)	(3-4)	(7-8)	(9-10)	(11-12)
-2	-4	(1-5)	(2-6)	(4-8)	(3-7)	(9-10)	(11-12)
-2	-6	(1-5)	(2-6)	(4-10)	(3-9)	(7-8)	(11-12)
-2	-8	(1-5)	(2-6)	(4-12)	(3-11)	(7-8)	(9-10)
-2	-10	(1-5)	(2-6)	(4-8)	(7-12)	(3-11)	(9-10)
-2	-12	(1-5)	(2-6)	(4-10)	(9-12)	(3-11)	(7-8)
-2	-14	(1-5)	(2-6)	(4-8)	(7-10)	(9-12)	(3-11)
-4	-4	(1-9)	(2-10)	(3-4)	(5-6)	(7-8)	(11-12)
-4	-6	(1-9)	(2-10)	(4-6)	(3-5)	(7-8)	(11-12)
-4	-8	(1-9)	(2-10)	(4-6)	(5-8)	(3-7)	(11-12)
-4	-10	(1-9)	(2-10)	(4-12)	(3-11)	(5-6)	(7-8)
-4	-12	(1-9)	(2-10)	(4-6)	(5-12)	(3-11)	(7-8)
-4	-14	(1-9)	(2-10)	(4-6)	(5-8)	(7-11)	(3-11)
-6	-6	(1-11)	(2-12)	(3-4)	(5-6)	(7-8)	(9-10)
-6	-8	(1-11)	(2-12)	(4-6)	(3-5)	(7-8)	(9-10)
-6	-10	(1-11)	(2-12)	(4-10)	(3-9)	(5-6)	(7-8)
-6	-12	(1-11)	(2-12)	(4-6)	(5-10)	(3-9)	(7-8)
-6	-14	(1-11)	(2-12)	(4-6)	(5-8)	(7-10)	(3-9)
-8	-8	(1-5)	(6-11)	(2-12)	(3-4)	(7-8)	(9-10)
-8	-10	(1-5)	(6-11)	(2-12)	(4-8)	(3-7)	(9-10)
-8	-12	(1-5)	(6-11)	(2-12)	(4-10)	(3-9)	(7-8)
-8	-14	(1-5)	(6-11)	(2-12)	(4-8)	(7-10)	(3-9)
-10	-10	(1-9)	(10-11)	(2-12)	(3-4)	(5-6)	(7-8)
-10	-12	(1-9)	(10-11)	(2-12)	(4-6)	(3-5)	(7-8)
-10	-14	(1-9)	(10-11)	(2-12)	(4-6)	(5-8)	(3-7)
-12	-12	(1-5)	(6-9)	(10-11)	(2-12)	(3-4)	(7-8)
-12	-14	(1-5)	(6-9)	(10-11)	(2-12)	(4-8)	(3-7)
-14	-14	(1-5)	(6-7)	(8-9)	(10-11)	(2-12)	(3-4)