

DATA SET 103C
TRANSMITTER-RECEIVER
FOR PRIVATE LINE SERVICE
INSTALLATION AND CONNECTION

1. INSTALLATION

1.01 For general information concerning the station installation, refer to standard practices covering installation of station sets.

1.02 Locate data set so that the interface cord can be plugged into the cord from the business machine.

- The cord from the business machine may be up to 50 feet long.
- The customer must provide and maintain room temperature of 50 to 110 F for proper operation of the data set.

1.03 The data set may be placed on top of a desk or table or may be mounted on a wall or on the side of a desk or table. When mounted in a vertical position, cover medallion should be rotated to the proper position (Fig. 1). The medallion is held on with two speed nuts located inside the cover.

THINK → When mounting set in vertical position, use care to avoid personal injury or damage to customer's equipment or wall surface.

2. CONNECTIONS

2.01 Remove the two lower Phillips screws in the faceplate and raise cover.

2.02 Remove the two rear chassis support screws and raise rear chassis on its hinge (Fig. 2).

2.03 Insert KS-16426, List 2 plug of the D16E-51 cord and the power cord into their connectors.

2.04 Remove the hood from the KS-19087 connector. Pass connector and cord ← ←

through the rectangular hole at rear of set. Replace hood. Pass power plug and cord through the same hole. Fasten both cords under cord clamp as shown in Fig. 2. ↗ ↘

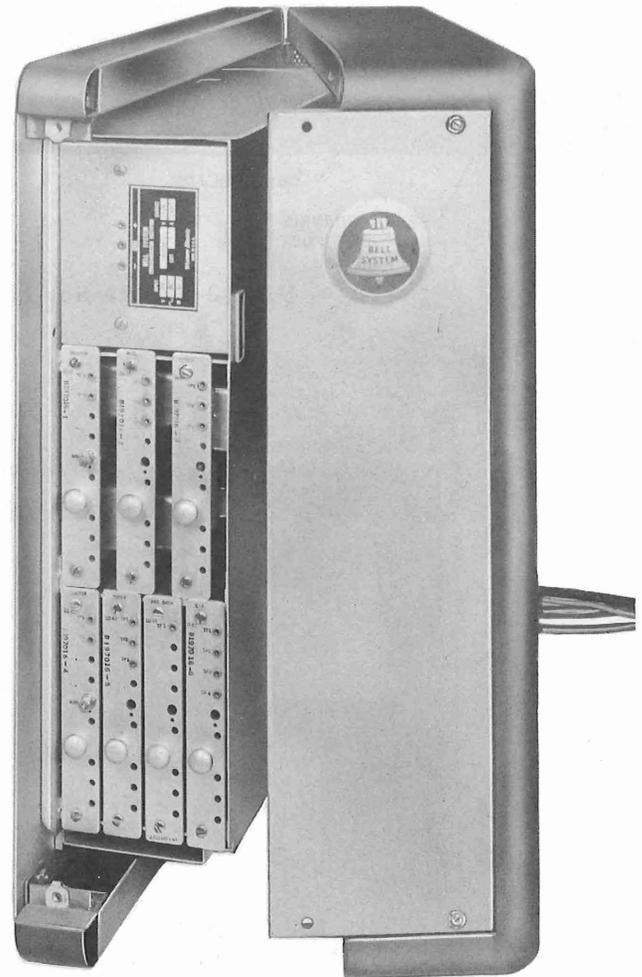


Fig. 1 - Data Set, Vertical Mounting

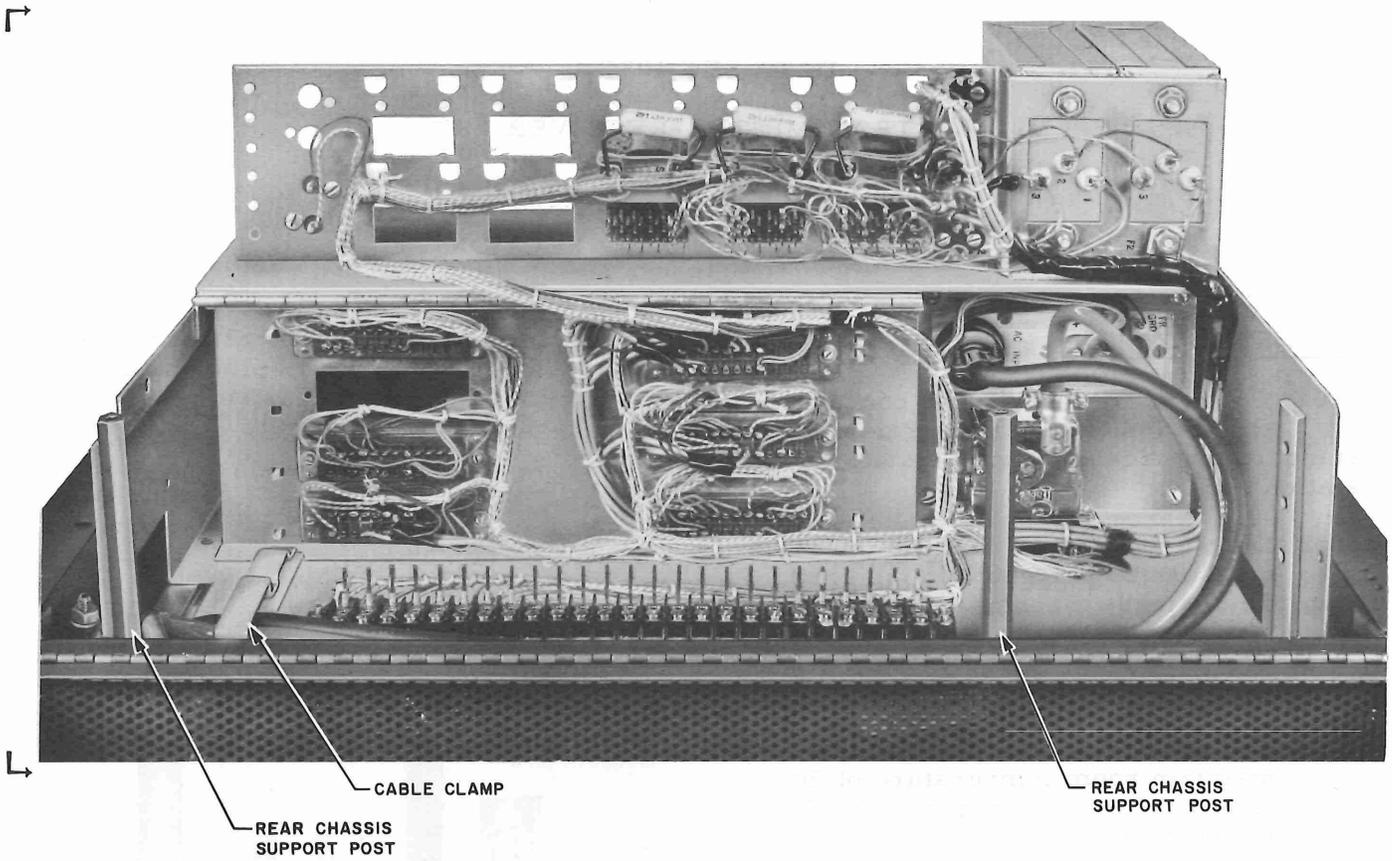


Fig. 2 - Data Set 103C (Rear Chassis Raised)

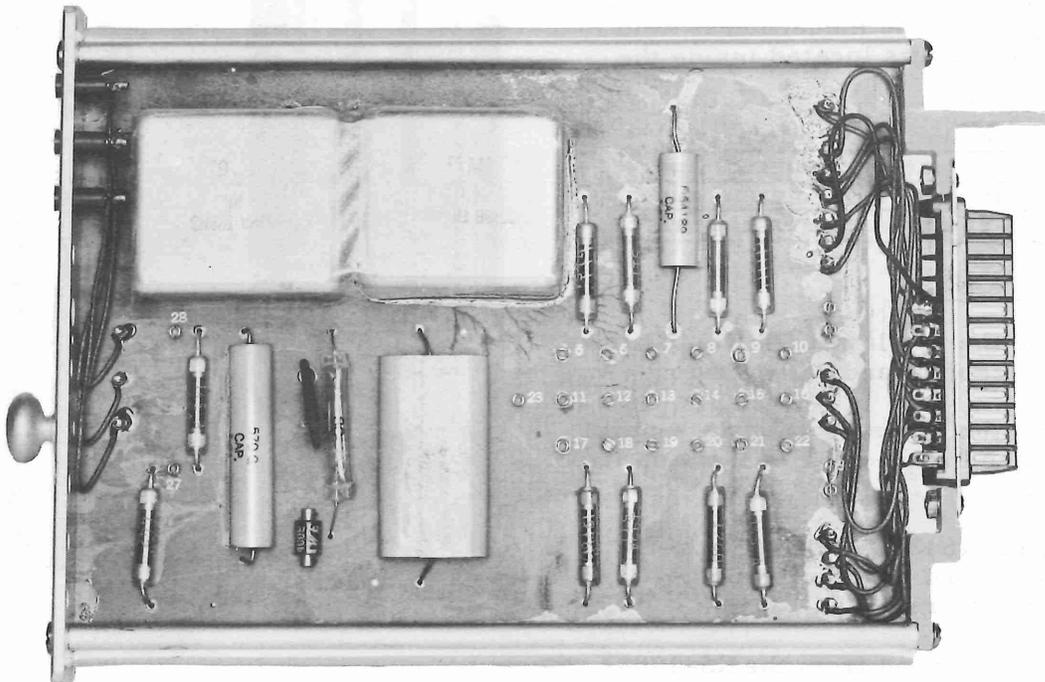


Fig. 3 - Hybrid Wiring Board

2.05 Inside wire or a separate mounting cord may be used to connect the line to the data set. Place in same manner as the other cords. Fasten the wire or cord inside the set so as to avoid strain on the terminations. Connect as follows:

<u>Lead</u>	<u>Terminal</u>
T	2
R	1

2.06 Provide wiring option OR for the originating station and option AN for the terminating station. Table A shows straps to be placed on terminal strip D.

TABLE A
OPTIONS

Operating Condition	Option	Strap
Originating	OR	21-22
Terminating	AN	21-20

2.07 If a negative unipolar CONNECT ON signal is required, modify set as shown below.

(1) At S relay arrange leads connected to contacts 10 break, 10 fixed, and 10 make as follows:

- BL-R to 10 break
- BK to 10 fixed
- R-W to 10 make

(2) Connect strap between terminals 25 and 9 of D terminal strip.

(3) Connect 3000-ohm, 1/2-watt resistor between terminals 8 and 9 of D terminal strip.

2.08 Receive sensitivity is controlled by strapping on terminals A, B, C, and D on the limiter board. Strap as shown in Table B.

2.09 The data set is factory-wired to provide a transmission level of 0 dbm on both channels. Levels may be changed by strapping the hybrid wiring board as shown in Table C.

- The terminals of the wiring board are of the solderless type (Fig. 3). The wire is held in place by friction. Use a KS-19092, List 1 tool to make the connections.

2.10 Terminals 27 and 28 on the hybrid board are strapped when necessary to improve return loss. The line should be checked from a data test center both with the strap in place and with it removed. The strapping arrangement that results in the most satisfactory return loss reading should be used.

TABLE B

RECEIVE SENSITIVITY

Sensitivity	Strap
-50 dbm	A to B*
-46 dbm	A to C
-42 dbm	A to D

* Factory strapping

TABLE C

CONNECTIONS ON HYBRID WIRING BOARD
FOR TRANSMISSION LEVELS

High Channel f_2	Low Channel f_1	Strap Connection
db		
0	0	(1-2) (3-4)
0	2	(1-7) (2-6) (3-4) (5-23)
0	4	(1-8) (2-9) (3-4) (10-16)
0	6	(1-20) (2-21) (3-4) (16-22)
0	8	(1-20) (2-18) (3-4) (12-17) (16-22) (19-21)
0	10	(1-20) (2-9) (3-4) (8-21) (10-14) (16-22)
0	12	(1-20) (2-9) (3-4) (5-12) (6-8) (7-21) (10-14) (16-22)
0	14	(1-20) (2-9) (3-4) (5-12) (6-8) (7-18) (10-14) (16-22) (17-23) (19-21)
2	2	(1-2) (3-19) (4-18) (11-17)
2	4	(1-7) (2-6) (3-19) (4-18) (5-12) (11-17)
2	6	(1-8) (2-9) (3-19) (4-18) (10-16) (11-17)
2	8	(1-20) (2-21) (3-19) (4-18) (11-17) (16-22)
2	10	(1-20) (2-6) (3-19) (4-18) (5-12) (7-21) (11-17) (16-22)
2	12	(1-20) (2-9) (3-19) (4-18) (8-21) (10-14) (11-17) (16-22)
2	14	(1-20) (2-9) (3-19) (4-18) (5-12) (6-8) (7-21) (11-17) (10-14) (16-22)
4	4	(1-2) (3-8) (4-9) (10-15)
4	6	(1-7) (2-6) (3-8) (4-9) (5-12) (10-15)
4	8	(1-8) (2-9) (3-19) (4-6) (5-13) (7-18) (10-16) (11-17)
4	10	(1-20) (2-21) (3-8) (4-9) (10-15) (16-22)
4	12	(1-20) (2-6) (3-8) (4-9) (5-12) (7-21) (10-15) (16-22)
4	14	(1-20) (2-6) (3-8) (4-9) (5-12) (7-18) (10-15) (16-22) (17-23) (19-21)
6	6	(1-2) (3-20) (4-21) (15-22)
6	8	(1-7) (2-6) (3-20) (4-21) (5-12) (15-22)
6	10	(1-8) (2-9) (3-20) (4-21) (10-16) (15-22)
6	12	(1-8) (2-6) (3-20) (4-21) (5-12) (7-9) (10-16) (15-22)
6	14	(1-8) (2-6) (3-20) (4-21) (5-12) (7-18) (9-19) (10-16) (15-22) (17-23)
8	8	(1-2) (3-19) (4-21) (11-17) (15-22) (18-20)
8	10	(1-7) (2-6) (3-19) (4-21) (5-12) (11-17) (15-22) (18-20)
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