

DATA SET 103A TYPE INSTALLATION AND CONNECTIONS

1. GENERAL

1.01 This section does not include information related to business machines used with Data Set 103A type.

1.02 This section is reissued to include information concerning the installation and connections of Data Set 103A type using the D35C-61 cord that replaces the D25C-61 cord. Since there are data sets existing in the field that use the D25C-61 cord, information concerning it will remain in this reissue. Due to extensive revision, marginal arrows have been omitted.

1.03 A Data Auxiliary Set 804B1 or 567PB-61 Telephone Set, Manufacture Discontinue (MD), is required for external control of the data set and to establish the data set transmission path. Information on these sets is contained in separate practices.

1.04 After installation and testing procedures are performed, complete and remit the enclosed self-addressed postal card.

2. INSTALLATION

2.01 Data Set 103A type (Fig. 1) must be installed in conformance with existing practices covering installation of station sets.



Do not install Data Set 103A2 at DATA-PHONE* service stations in systems providing communications with 3-row 60 wpm teletypewriter equipment.

* Service Mark of the American Telephone and Telegraph Company.

2.02 The set must be located within range of the interface connector cord supplied by the customer. This cord should not exceed 50 feet in length.

2.03 To avoid interference during data transmission, the following restrictions apply to the data line where practicable:

- Use only on individual lines.
- Do not connect extension telephones.



Data line must not appear on key telephone systems having "A" lead control such as 1A1 key telephone systems.

2.04 To minimize inductive interference to data signals on the telephone (data) line, the line should not be carried in the same run as cable between the data set and customer's business machine or lines connected to dc teletypewriter services. If this requirement cannot be met, it will be necessary to run telephone (data) line in SK (shielded) station wire between the data set and cable distribution terminal or building entrance.

2.05 The customer must furnish a 3-wire ac outlet that is not under control of a switch. The outlet must accept a plug having two parallel blades and a U-shaped grounding pin providing a connection to each ground in accordance with local codes and regulations. To avoid the possibility of data errors due to a ground potential difference, the data set and business machine should be powered from the same ac distribution panel. If not, an impulse noise test should be made as described in the section entitled Data Set 103A Type, Test Procedures (591-014-500). If test requirement is not met, data set ground and business machine ground must be bonded together.



The method of providing this bond should be in accordance with local instructions.

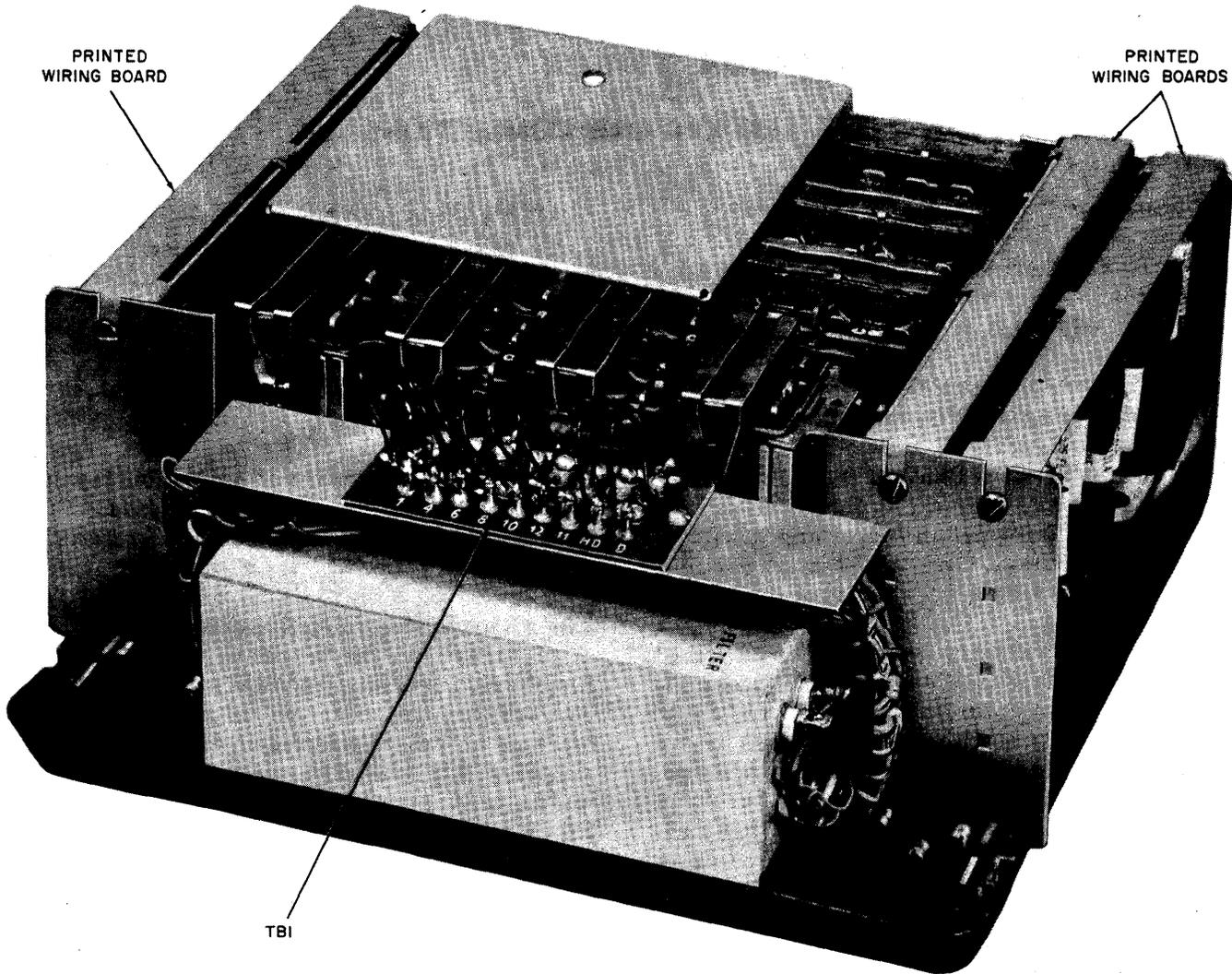


Fig. 1 — Data Set 103A Type, Front Cover Removed

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

2.07 Verify with the local test center that loop facilities have been tested and meet transmission requirements specified in the practice Data Systems—On Direct Distance Dialing (DDD) Network DATA-PHONE Services—Transmission Requirements DATA-PHONE Subscriber Lines (Section 314-205-500).

2.08 When the Data Auxiliary Set 801A type is used, the telephone line must be arranged for ground-start operation. When Data Auxiliary Set 801C type is used, the telephone line must be arranged for TOUCH-TONE® signaling.

3. CONNECTIONS

3.01 Fig. 2 shows connections between the data set and 567PB-61 Telephone Set (MD). See Fig. 3 for connections between data set and Data Auxiliary Set 804B1. Connection to Data Auxiliary Set 801A type or 801C type is made as shown in Fig. 4 or Fig. 5. These figures show connections made using the D25C-61 cord.



To prevent damage to transistor circuits, disconnect data set power cord until all connection work is completed or when making any wiring changes.

3.02 A D35C-61 cord is furnished with the data set. This cord replaces the D25C-61 cord (MD). The physical arrangement using the new type cord is shown in Fig. 6. The details of the connections at the 1044A connecting block differ for the following arrangements:

- Data Set 103A type and Data Auxiliary Set 804B1 (See Fig. 7 and 8.)
- Data Set 103A type and Data Auxiliary Set 804B1 and Data Auxiliary Set 801A type,

or Data Set 103A type and Data Auxiliary Set 804B1 and Data Auxiliary Set 801C (ground-start) (See Fig. 7 and 9.)

- Data Set 103A type and Data Auxiliary Set 804B1 and Data Auxiliary Set 801C (loop-start) (See Fig. 7 and 10.)

3.03 Options shown in Tables A, B, and C or D should be specified on the service order. The data set should be arranged accordingly.

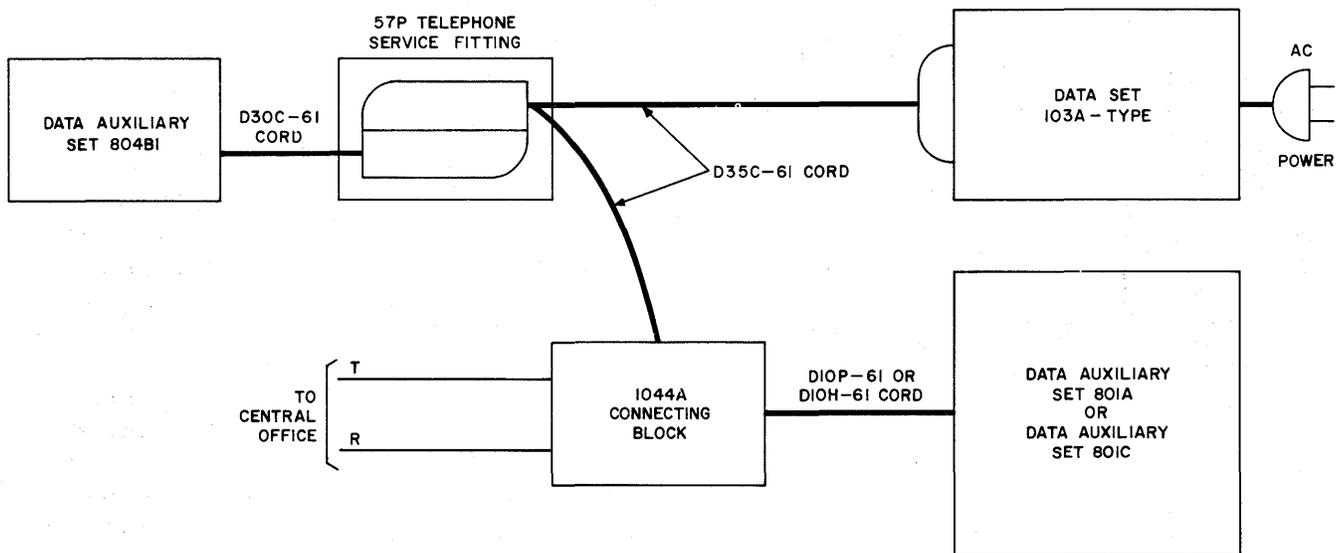


Fig. 6 — Physical Arrangement Using D35C-61 Cord

3.04 The data set is factory-strapped to provide:

- Initiate Disconnect
- Respond to Disconnect
- Mark Hold

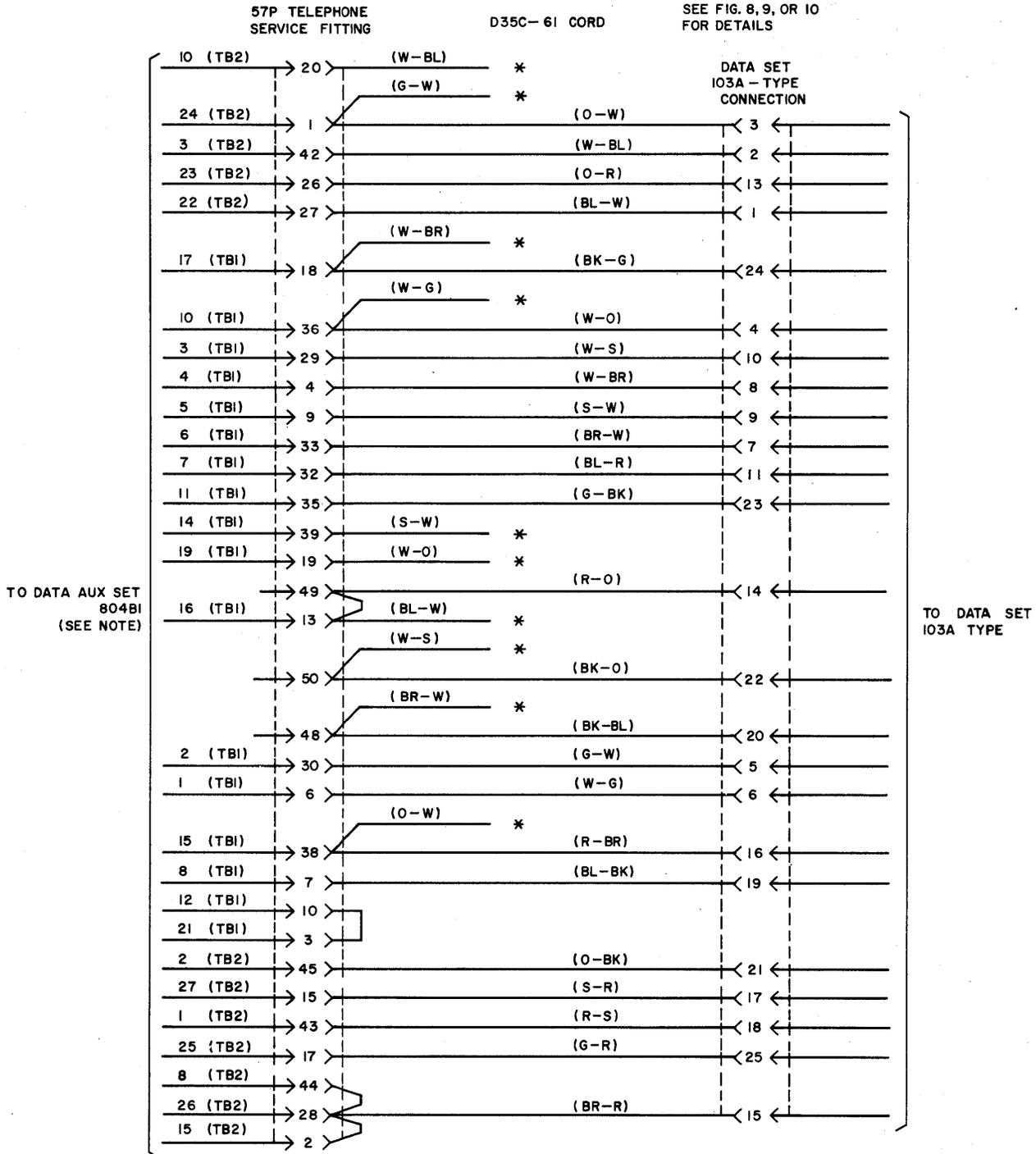
3.05 The data set is factory-strapped to provide a transmission level of 0 dbm on both channels. Levels may be changed in 2-db steps by rearranging spade-tipped straps on TB1 as shown in Table B.

3.06 The Data Auxiliary Set 804B1 or 567PB-61 Telephone Set (MD) associated with the data set is factory-wired for voice communication. When used at TWX stations, listen-only is required. Move the R handset cord lead from R to B of the network.

3.07 Three answering options are available as shown in Table C or D.

SECTION 591-014-200

* TO 1044A
CONNECTING BLOCK
SEE FIG. 8, 9, OR 10
FOR DETAILS



NOTE:
IN DATA AUX SET 804BI MOVE THE ORANGE LEAD ON TB2-8 TO TB2-1.

Fig. 7 — P/O Connections Between Data Set 103A Type and Data Auxiliary Set 804BI

TABLE A
SERVICE OPTIONS

OPTION	STRAP CONNECTION TB1	PROVIDE
Responds to Disconnect*	T1 to LS	1 Per Station
Does Not Respond to Disconnect	T1 to NO	
Initiates Disconnect*	D to LD	1 Per Station
Does Not Initiate Disconnect	D to QD	
Mark Hold*	HD to MH	1 Per Station
Space Hold	HD to SH	

*Factory-wired option

TABLE B
TRANSMIT LEVEL OPTIONS

TRANSMIT LEVELS		TB1 STRAP CONNECTIONS					
DBM							
LOW CHANNEL F1	HIGH CHANNEL F2						
0*	0*	(1-2)	(3-4)	(5-6)	(7-8)	(9-10)	(11-12)
-4	0	(1-2)	(3-10)	(4-9)	(5-6)	(7-8)	(11-12)
-6	0	(1-2)	(3-12)	(4-11)	(5-6)	(7-8)	(9-10)
-4	-2	(1-5)	(2-6)	(3-8)	(4-7)	(9-10)	(11-12)
-6	-2	(1-5)	(2-6)	(3-10)	(4-9)	(7-8)	(11-12)
-8	-2	(1-5)	(2-6)	(3-12)	(4-11)	(7-8)	(9-10)
-4	-4	(1-9)	(2-10)	(3-4)	(5-6)	(7-8)	(11-12)
-6	-4	(1-9)	(2-10)	(3-6)	(4-5)	(7-8)	(11-12)
-8	-4	(1-9)	(2-10)	(3-6)	(5-8)	(4-7)	(11-12)
-10	-4	(1-9)	(2-10)	(3-12)	(4-11)	(5-6)	(7-8)
-6	-6	(1-11)	(2-12)	(3-4)	(5-6)	(7-8)	(9-10)
-8	-6	(1-11)	(2-12)	(3-6)	(4-5)	(7-8)	(9-10)
-10	-6	(1-11)	(2-12)	(3-10)	(4-9)	(5-6)	(7-8)
-12	-6	(1-11)	(2-12)	(3-6)	(5-10)	(4-9)	(7-8)
-8	-8	(1-5)	(6-11)	(2-12)	(3-4)	(7-8)	(9-10)
-10	-8	(1-5)	(6-11)	(2-12)	(3-8)	(4-7)	(9-10)
-12	-8	(1-5)	(6-11)	(2-12)	(3-10)	(4-9)	(7-8)
-14	-8	(1-5)	(6-11)	(2-12)	(3-8)	(7-10)	(4-9)

*Factory-wired option

TABLE C
ANSWERING OPTIONS
(D25C-61 CORD)

ANSWERING OPTION	WIRING* OPTION	DATA AUXILIARY OR TELEPHONE SET MODIFICATION
Alternate Automatic or Manual	W	None
Manual (No Automatic Answer)	—	Block AUTO button using P-12A858 blocking ring.
Permanent Automatic Answer (No Manual Control)	Z	Block AUTO button using P-12A858 blocking ring.

*See Fig. 2, 3, 4, or 5.

TABLE D
ANSWERING OPTIONS
(D35C-61 CORD)

ANSWERING OPTION	DATA AUXILIARY SET MODIFICATION
Alternate Automatic or Manual	None
Manual (No Automatic Answer)	Block AUTO button using P-12A858 blocking ring.
Permanent Automatic Answer (No Manual Control)	Block AUTO button using P-12A858 blocking ring. Strap terminals TB1-1 to TB1-2

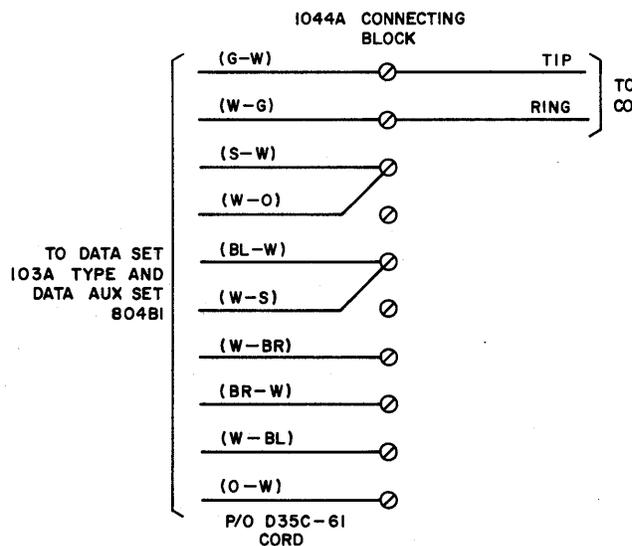
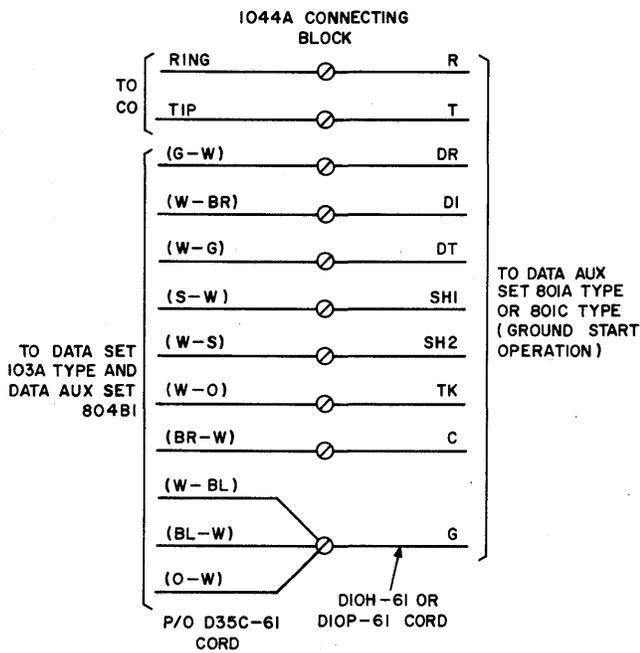


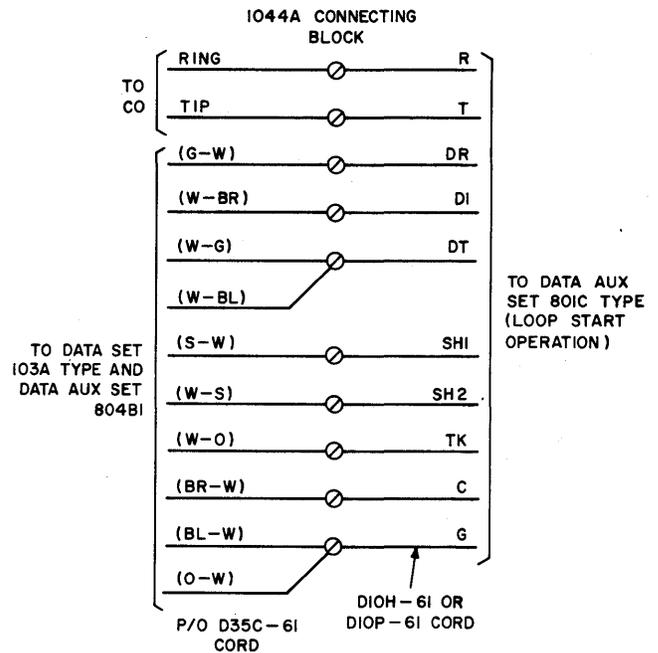
Fig. 8 — P/O Connections Between Data Set 103A Type and Data Auxiliary Set 804B1



ACU CORDS

DESIG	DIOP	DIOH
R	BL-W	R
T	W-BL	G
DR	G-W	BR-R
DI	W-BR	W
DT	W-G	BR-G
SH1	S-W	BL
SH2	W-S	BR-Y
TK	W-O	BR-BK
C	BR-W	BK
G	O-W	Y
	(STD)	(MD)

Fig. 9 — P/O Connections Between Data Set 103A Type, Data Auxiliary Set 804B1 and Data Auxiliary Set 801A Type or 801C Type (Ground-Start)



ACU CORDS

DESIG	DIOP	DIOH
R	BL-W	R
T	W-BL	G
DR	G-W	BR-R
DI	W-BR	W
DT	W-G	BR-G
SH1	S-W	BL
SH2	W-S	BR-Y
TK	W-O	BR-BK
C	BR-W	BK
G	O-W	Y
	(STD)	(MD)

Fig. 10 — P/O Connections Between Data Set 103A Type, Data Auxiliary Set 804B1, and Data Auxiliary Set 801C Type or 801A Type (Loop-Start)