REPLACING PAGE ADDENDUM
Filing Instructions:

1. REMOVE FROM THE SECTION THE PAGES NUMBERED THE SAME AS THOSE ATTACHED TO THIS PINK SHEET.
2. INSERT THE ATTACHED PAGES INTO THE SECTION IN THEIR PLACE.
3. PLACE THIS PINK SHEET AHEAD OF PAGE 1 OF THE SECTION.

DATA SET 103F-TYPE

TEST PROCEDURES

1. GENERAL

1.001 This addendum supplements Section 591-019-500, Issue 3. The attached pages must be inserted in the section in accordance with the filing instructions above.

1.002 This addendum is reissued to delete the red shorting pin in the 914B data test set programming matrix at row DS1, column 2 in Fig. 7.

3. TESTS

The following change applies to Part 3 of the section:

(a) Figure 7—revised.

Attached:

Page 11 dated May 1973, reissued
Page 12 dated May 1973, reissued
Page 24 dated May 1973, revised

DATA SET 103F-TYPE

TEST PROCEDURES

CONTENTS PAGE

1. GENERAL

1.01 This section describes the test procedures to be performed at the time of installation of or when investigating trouble conditions associated with Data Set 103F-type.

1.02 This section is reissued to include the power ground noise test, interface test, and end-to-end test using the 914B Data Test Set (DTS). Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

A. Power Ground Noise Test (Using 6A Impulse Counter):

B. Loop-Back Test:

C. Interface Test from Serving Test Center (901B Data Test Sets):

D. End-To-End Test (901B, 902-type, 903-type Data Test Sets):

E. Power Ground Noise Test (914B Data Test Set):

F. Interface Test from Serving Test Center (914B Data Test Set):

G. End-To-End Test (914B Data Test Set):

1.04 Prior to performing tests, verify the following:

(a) The overall transmission facilities meet requirements specified in the section entitled Private Line Data Circuits—Voice Bandwidth Circuits for Miscellaneous Data—Overall Tests and Requirements (314-410-500).

(b) The test equipment is in good operating condition. Refer to the appropriate sections covering operational and calibration tests of test equipment as follows:

(1) J94006A(6A) Impulse Counter—Description, Operation and Maintenance (103-620-100)

(2) 901A and 901B Data Test Sets—Identification and Operation (and adapter) (107-100-100)

(3) 902-Type Data Test Sets—Identification and Operation (107-300-100)

(4) 903-Type Data Test Sets—Description and Operation (107-200-100)

(5) 914B Data Test Set—Description and Operation (107-101-100).

1.05 The power ground noise test should be performed when required. See section entitled Data Set 103F-Type—Transmitter-Receiver—Installation (591-019-200).

1.06 The loop-back test should be made at the time of installation by the nearest data test center (DTC).

1.07 The interface tests require assistance of the nearest serving test center (STC).

1.08 When the power ground noise test, loop-back test, and interface test have been completed and the test requirements have been met, suggest that the customer verify that service is satisfactory. If the customer does not have any messages to transmit, consider Data Set 103F-type satisfactory for service.

1.09 The end-to-end test should be performed if the customer has experienced a high error rate and the power ground noise test, loop-back test, and interface test indicate that Data Set 103F-type is satisfactory for operation. In this case, transmission facility trouble is probable which can be detected by this test.

2. APPARATUS

2.01 The apparatus required for each test is shown in Table A.

TABLE A

APPARATUS	TESTS								
				D				G	
	A	B	C	REC TERM.	TRANS TERM.	E	F	REC TERM.	TRANS TERM.
6A Impulse Counter	1					1			
901B Data Test Set (J79901B)			1	1	1				
Interface Test Adapter (J79901B-L3 — cover of J79901B)	1			1	1				
902-Type Data Test Set (J79902)*				1*					
903-Type Data Test Set (J79903)*				1*	1*				
914B Data Test Set						1	1	1	1
KS-14510-L1 Volt-Ohm-Milliammeter, or equivalent			1						
Serving Test Center		1	1				1		

* If 902B and 903B Data Test Sets are used at the receive terminal, 903B Data Test Set must be used at the transmit terminal. If 902C and 903C Data Test Sets are used at the receive terminal, 903C must be used at the transmit terminal. The 902B and 903B Data Test Sets cannot work into 903C Data Test Set and vice versa.

3. TESTS

A. Power Ground Noise Test (Using 6A Impulse Counter)

3.01 The following equipment is required for Test A:

- 6A impulse counter
- Interface test adapter (J79901B-L3—cover of J79901B)

STEP	PROCEDURE
1	Connect 6A impulse counter and interface test adapter as shown in Fig. 1.
2	Unbridge terminals 1 and 7 of interface test adapter.
	Note: Do not ground 6A impulse counter for this test.
3	At 6A impulse counter—
	Set WTG switch to VOICE BAND.
4	Set REF LEV DBRN toggle switch to ADD 30.
5	Set REF LEV DBRN rotary switch to 60.
6	Set MINUTES switch to 15.
7	Operate RESET level to reset counter to 0000.
	Requirement: Counter remains at 0000 for 15 minutes.
	Note: If any counts are noted in a 15-minute period, grounding arrangements must be improved.

B. Loop-Back Test

3.02 This test requires the assistance of the nearest DTC.

3.03 Using customer telephone line facility, call the DTC and request a test of Data Set 103F-type. When instructed by the DTC, operate the appropriate test key. When test lamp is lighted, release test key. The DTC can now check sensitivity of the data set, frequency and level of mark and space signals, and the slicing point.

3.04 At end of test, the DTC will restore the data set to normal by removing carrier frequency from line, causing the test lamp to extinguish.

C. Interface Test From Serving Test Center (901B Data Test Set)

3.05 The following equipment is required for Test C:

- 901B DTS (J79901B)
- Interface test adapter (J79901B-L3—cover of J79901B)
- KS-14510-L1 volt-ohm-milliammeter, or equivalent.

3.06 Assistance in performing this test will be required from the STC.

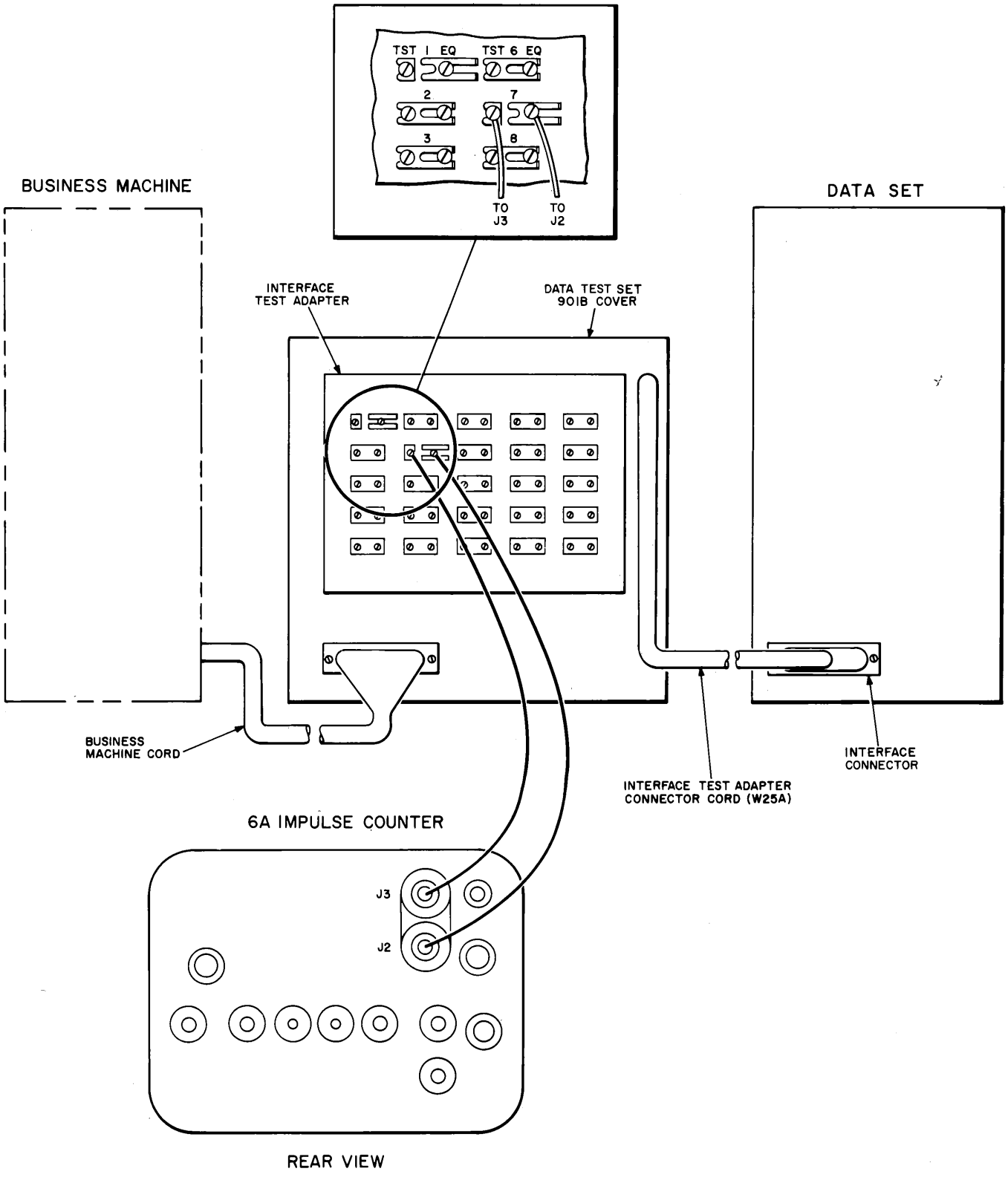

Fig. 1—Power Ground Noise Test Using 6A Impulse Counter

3.07 ***Test Procedure:***

STEP	PROCEDURE
1	Disconnect customer interface cable from interface connector on Data Set 103F-type.
2	Remove covers of Data Set 103F-type.
	Note: Check TB2 for proper line terminations and ensure that TB1 is strapped for proper transmit levels as shown on service order or circuit layout card.
3	Strap MD to XC on TB1.
4	Strap and open connections of interface test adapter as shown in Fig. 2.
5	Set 901B DTS SELECTOR switch to position 1.
	Caution: During interface tests, be sure that the SELECTOR switch position 1 is not changed. If the SELECTOR switch is moved from position 1 during these tests, data set cards may be damaged.
6	Connect interface test adapter to data set interface connector.
7	Arrange equipment as shown in Fig. 3.
8	Set 901B DTS A TEST switch to 2.
9	Set 901B DTS B TEST switch to OFF.
10	Set 901B DTS ATT/UNATT toggle switch to ATT.
11	Set volt-ohm-milliammeter (VOM) scale switch to 60 VDC.
12	Connect Data Set 103F-type power plug to ac receptacle.
13	Connect VOM − lead to terminal A and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead BB is in the mark condition.
14	Disconnect VOM.
15	Set 901B A TEST switch to 3.
16	Connect VOM − lead to terminal C and + lead to terminal B.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CC is in the on condition.
17	Disconnect VOM.

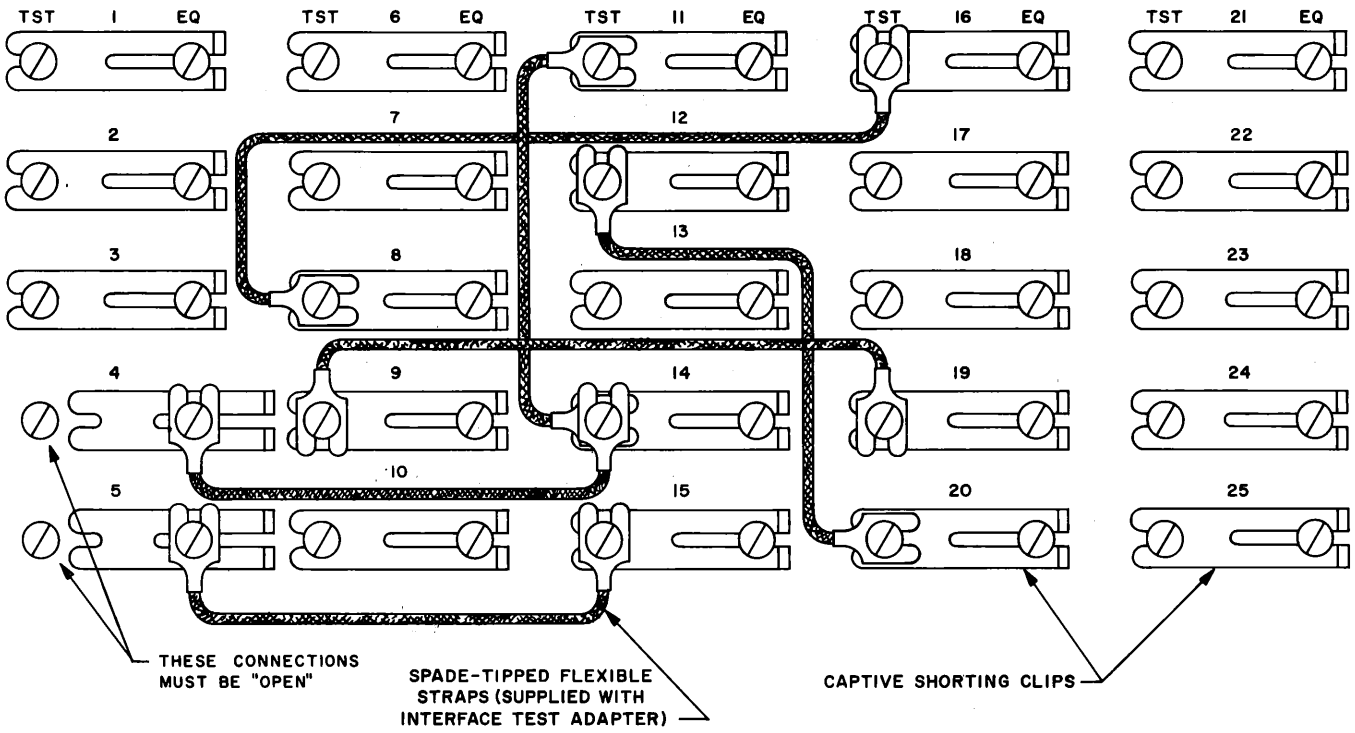

Fig. 2—Data Set 103F-Type Interface Adapter Connection Arrangement

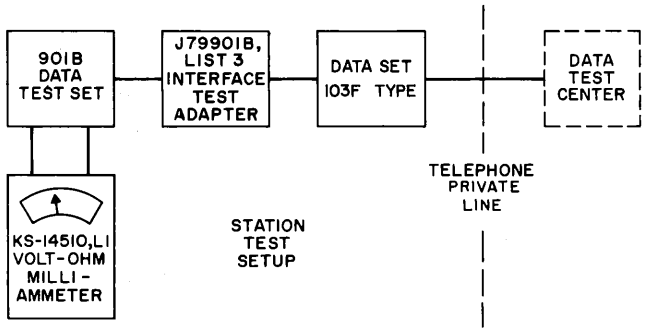

Fig. 3—Interface Test Using 901B Data Test Set, Block Diagram

STEP	PROCEDURE
18	Set 901B DTS A TEST switch to 4.
19	Connect VOM – lead to terminal B and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CF is in the off condition.
20	Set 901B DTS A TEST switch to 5.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CB is in the off condition.
21	Disconnect VOM.
22	Set 901B DTS ATT/UNATT toggle switch to UNATT.
	Requirement: LO relay operated.
23	Set 901B DTS A TEST switch to 3.
24	Connect VOM – lead to terminal B and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CC is in the off condition.
25	Disconnect VOM.
26	Set 901B DTS A TEST switch to OFF.
27	Set VOM scale switch to OHMS 1.
28	Connect VOM – lead to RECEIVE DATA red terminal and + lead to TRANSMIT DATA red terminal.
	Requirement: VOM indicates between 0 and 2.0 ohms.
	Note: Interface lead BA connected to interface lead BB.
29	Disconnect VOM.
30	Using customer-provided telephone, call and request STC to send a tone of 2225 Hz to data set under test. Maintain voice communication.
31	When informed by STC via customer-provided telephone that tone has been sent, operate TST (TST1) key.

STEP	PROCEDURE
	Note: TST is the indication for the test switch for Data Set 103F1. The information enclosed within parentheses stands for the similar switch of Data Set 103F2.
32	Request the STC to increase the dB level until informed that the TST (TST1) lamp has lighted.
33	Release TST (TST1) key.
	Requirement: TST (TST1) lamp lighted. LO and TE relays released. M relay operated. Data set is transmitting f1, receiving f2, and is in the test mode.
34	Set 901B DTS A TEST switch to 3.
35	Set 901B DTS ATT/UNATT toggle switch to ATT.
36	Set VOM scale switch to 60 VDC.
37	Connect VOM − lead to terminal B and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CC is in the off condition.
38	Set 901B DTS A TEST switch to 4.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CF is in the off condition.
39	Set 901B DTS A TEST switch to 5.
40	Set 901B DTS B TEST switch to 3.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CB is in the off condition.
41	Disconnect VOM.
42	Operate TST (TST1) key and release.
	Requirement: TST (TST1) lamp extinguished.
	Note: If TST (TST1) lamp does not extinguish, wait approximately 10 seconds and operate TST (TST1) key again and release.
43	Using customer-provided telephone, request STC to verify a tone of 1270 Hz (fim) is coming from the data set.

STEP	PROCEDURE
44	Set VOM scale switch to 12 VDC.
45	When informed by STC via customer-provided telephone that tone has been received, connect VOM – lead to terminal C and + lead to terminal B.
	Requirement: VOM indicates between 7.0 and 10.0V dc.
	Note: Interface lead CB is in the on condition.
46	Disconnect VOM.
47	Set VOM scale switch to 60 VDC.
48	Set 901B DTS A TEST switch to 4.
49	Set 901B DTS B TEST switch to OFF.
50	Using customer-provided telephone, request STC to send a tone of 2225 Hz to data set.
51	When informed by STC via customer-provided telephone that tone has been sent, connect VOM – lead to terminal C and + lead to terminal B.
	Note: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead CF is in the on condition.
52	Disconnect VOM.
53	Set 901B DTS A TEST switch to 2.
54	Connect VOM – lead to terminal A and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead BB is in the mark condition.
55	Disconnect VOM.
56	Set VOM scale switch to 12 VDC.
57	Using customer-provided telephone, request STC to send a tone of 2025 Hz to data set.
58	When informed by STC via customer-provided telephone that tone has been sent, connect VOM – lead to terminal C and + lead to terminal A.
	Requirement: VOM indicates between 7.0 and 10.0V dc.
	Note: Interface lead BB is in the space condition.

STEP	PROCEDURE
59	Disconnect VOM.
60	Using customer-provided telephone, request STC to remove 2025-Hz tone from line.
61	Set 901B DTS B TEST switch to 5.
	Requirement: AN relay operated.
62	Set VOM scale switch to 60V dc.
63	Connect VOM − lead to terminal A and + lead to terminal C.
	Requirement: VOM indicates between 19.0 and 25.0V dc.
	Note: Interface lead BB is in the mark condition.
64	End of test. Inform STC and restore normal operating conditions.

D. End-to-End Test (901B, 902-Type, 903-Type Data Test Sets)

3.08 The following is listed for Test D and required at both transmit and receive terminals:

- 901B DTS (J79901B)
- Interface test adapter (J79901B-L3—cover of J79901B)
- 902-type DTS (J79902)
- 903-type DTS (J79903)

Note: If 902B and 903B DTSs are used at the receive terminal, 903B DTS must be used at the transmit terminal. If 902C and 903C DTSs are used at the receive terminal, 903C must be used at the transmit terminal. The 902B and 903B DTSs cannot work into 903C DTS and vice versa.

3.09 ***Test Procedure:***

STEP	PROCEDURE
1	Establish voice communication between the two data set locations.
2	At transmit terminal, arrange and strap equipment as shown in Fig. 4 (strap MD to OR).
	Caution: Do not connect power to 903-type DTS until all DTSs are properly arranged and the interface test adapter straps and connections have been made.
3	At receive terminal, arrange and strap equipment as shown in Fig. 4 (strap MD to AN).
	Caution: Be sure SELECTOR switch of 901B DTS at both transmit terminal and receive terminal is not changed from position 1 since there is a possiblility the 903 DTS output transistor circuit will be damaged by any change during the test.

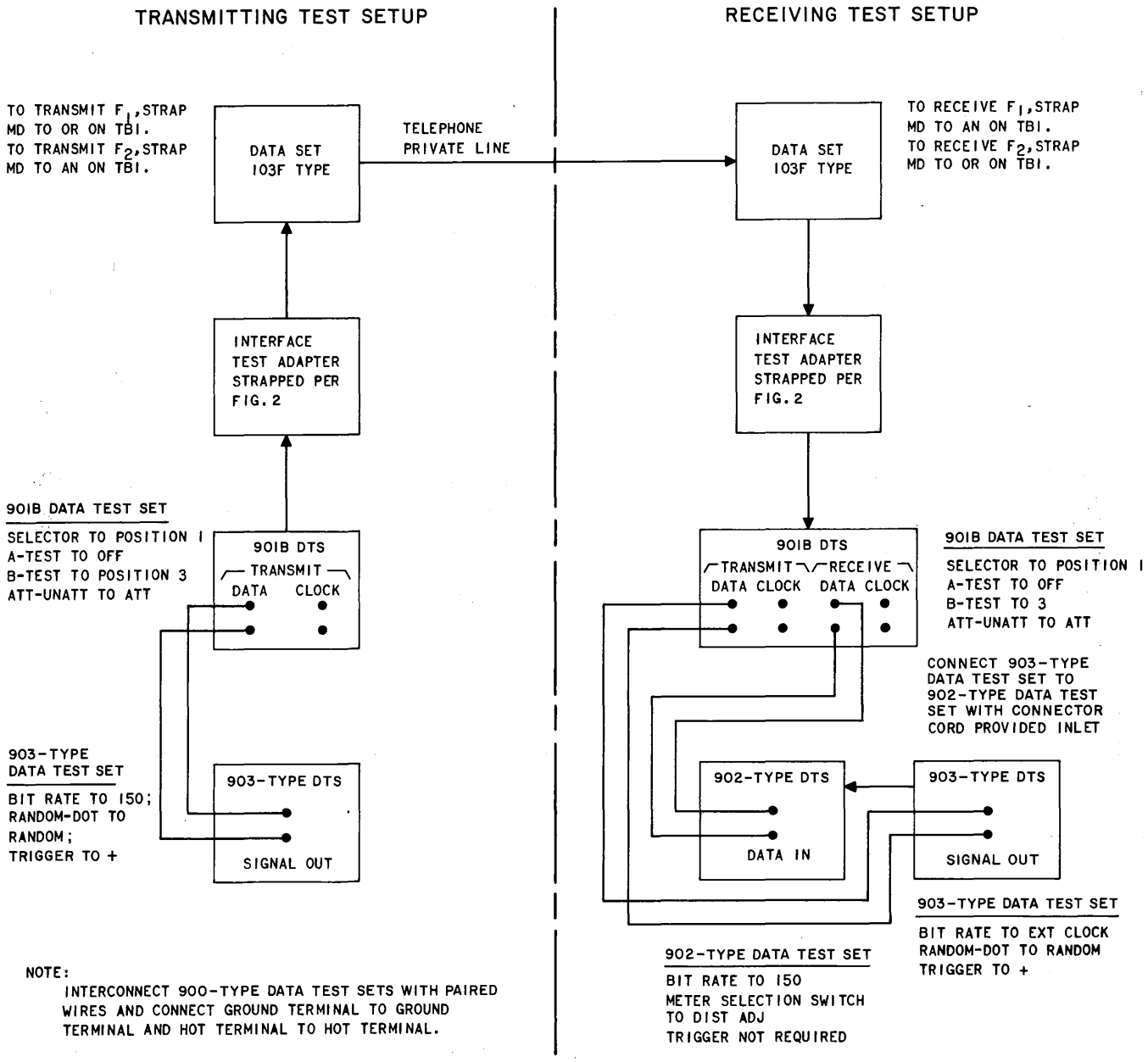

Fig. 4—End-to-End Test Using 901B Data Test Set, 902-Type Data Test Set, and 903-Type Data Test Set, Block Diagram

STEP	PROCEDURE
4	At transmit terminal 903-type DTS, momentarily operate the START key.
5	At receive terminal 902-type DTS, set meter selection switch to DIST ADJ.
6	After several seconds, adjust DISTORTION control for a zero meter reading.
7	Set meter selection switch to VOLT ADJ.
8	Adjust VOLTS control for a zero meter reading.
9	Set meter selection to PHASE ADJ.
10	Adjust PHASE control for a zero meter reading. ***Note:*** The BIAS ADJ position is not used in this test.
11	Set meter selection switch to DIST MEAS.
12	Momentarily operate the WORD SYNC & RESET key and note the time.
13	At the end of one minute, record number of errors shown on the TOTAL ERRORS lamps and the average peak distortion as shown on the 902-type DTS microammeter and repeat Step 12. ***Note 1:*** One microamp is equal to 1-percent distortion. ***Note 2:*** To determine total number of errors, add the numbers panel stamped next to the TOTAL ERRORS lamps together. For example, lighted 8, 4, and 1 lamps equal 13 total errors.
14	Repeat Step 13 until 10 total error recordings and 10 peak distortion measurements have been made. ***Requirement 1:*** Nine of the ten 1-minute test periods must be error-free. ***Requirement 2:*** An average peak distortion of 20 percent must not be exceeded in the 10-minute test period. ***Note:*** An occasional peak over 20 percent is permissible as long as the 20 percent average is not exceeded.
15	At transmit terminal, move strap from OR to AN on TB1.
16	At receive terminal, move strap from AN to OR on TB1.
17	Repeat Steps 4 through 14.
18	Reverse equipment setup (original transmit terminal is now receive terminal and original receive terminal is now transmit terminal).

STEP	PROCEDURE
19	Repeat Steps 4 through 14.
20	At transmit terminal, move strap from OR to AN on TB1.
21	At receive terminal, move strap from AN to OR on TB1.
22	Repeat Steps 4 through 14.
23	End of test. Disconnect all test equipment and restore to normal operating condition.

E. Power Ground Noise Test (914B Data Test Set)

3.10 The following equipment is required for Test E:

- 6A impulse counter
- 914B DTS

3.11 ***Test Procedure:***

STEP	PROCEDURE
1	Remove all programming pins from the 914B DTS matrix.
2	Operate (depress) all interface selector switches except 1A, 1B and 7A, 7B.
3	Connect equipment as shown in Fig. 5.
	Note: Do not ground 6A impulse counter.
4	Set WTG switch to VOICE BAND.
5	Set REF LEV DBRN toggle switch to ADD 30.
6	Set REF LEV DBRN rotary switch to 60.
7	Set MINUTES switch to 15.
8	Reset counter to 0000 by use of the RESET lever.
	Requirement: Counter remains at 0000 for 15 minutes.
	Note: If any counts are noted in a 15-minute period, grounding arrangements must be improved.

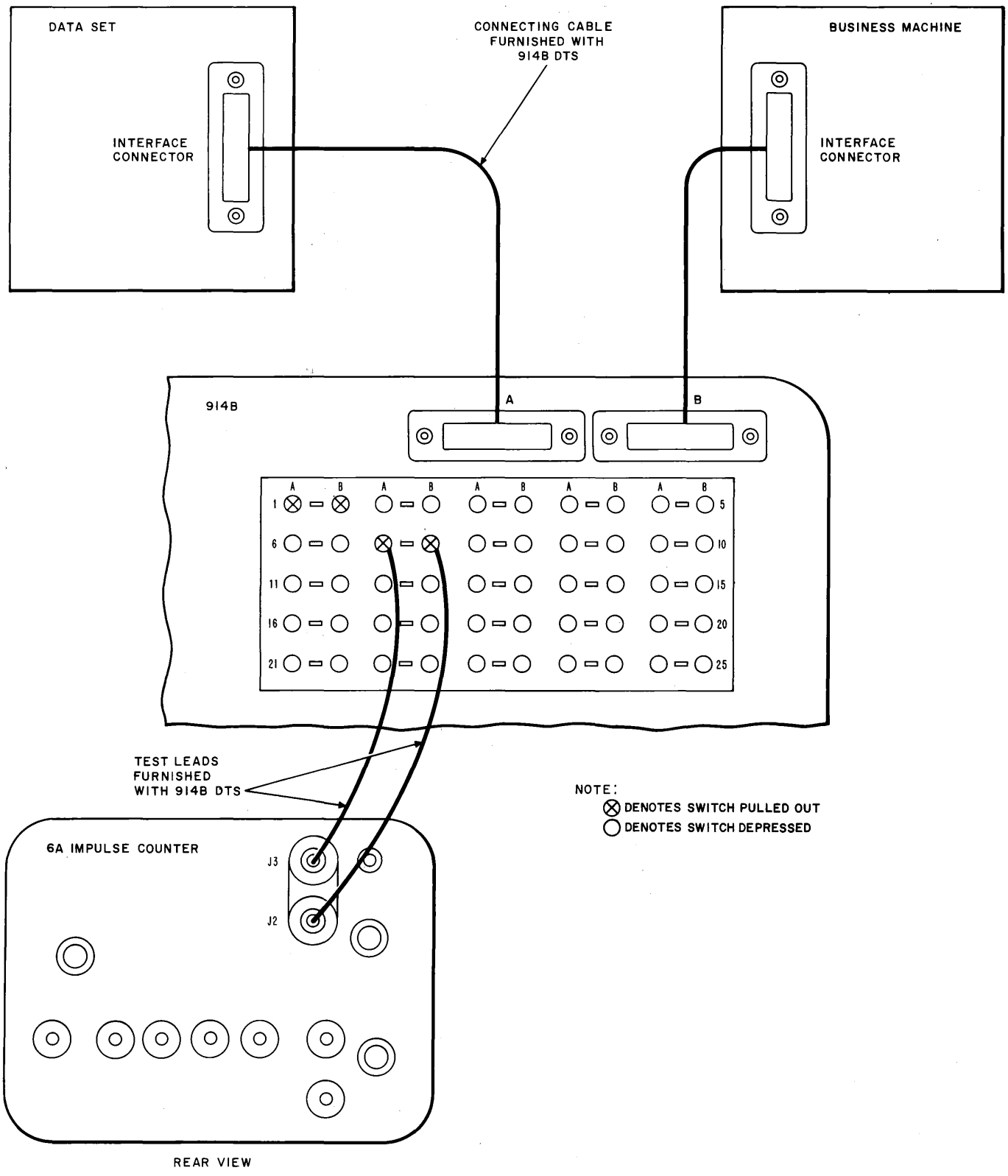

Fig. 5—Power Ground Noise Test Using 914B Data Test Set

F. Interface Tests from Serving Test Center (914B Data Test Set)

3.12 The following equipment is required for Test F:

- 914B DTS

3.13 Assistance in performing this test will be required from the STC

Before making any test connections, ensure that all programming pins are removed from the 914B DTS matrix. Insert only those pins shown in the test connection diagram (Fig. 6).

3.14 ***Test Procedure:***

STEP	PROCEDURE
1	Program matrix and set switches of the 914B DTS as shown in Fig. 6.
2	Connect the 914B DTS to data set interface connector with cord provided.
3	Remove covers from data set.
	Note: Check TB2 for proper line terminations and ensure TB1 is strapped for proper transmit levels as shown on service order or circuit layout card.
4	Strap MD to XC on TB1.
5	Connect Data Set 103F-type power plug to ac receptacle.
6	Operate POWER switch on 914B DTS.
	Requirement: POWER lamp lighted. DS5 lamp lighted.
7	Set 914B DTS S7 toggle switch to ON.
	Requirement: DS7 lamp lighted. AN relay released.
8	Set 914B DTS VERTICAL MONITOR switch to 3.
9	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 12.0 and 15.0V dc.
	Note: Interface lead BB is in the mark condition (mark hold).
10	Set FUNCTION switch to OFF.
11	Set VERTICAL MONITOR switch to 6 and METER POLARITY toggle switch to NOR.
12	Set FUNCTION switch to VOLT INT.
	Requirements: METER indicates between 14.0 and 18.0V dc. DS6 lamp lighted.
	Note: Interface lead CC is in the on condition.

STEP	PROCEDURE
13	Set FUNCTION switch to OFF.
14	Set VERTICAL MONITOR switch to 8 and METER POLARITY toggle switch to REV.
15	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 11.0 and 14.0V dc.
	Note: Interface lead CF is in the off condition.
16	Set FUNCTION switch to OFF.
17	Set VERTICAL MONITOR switch to 5.
18	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 8.0 and 10.0V dc.
	Note: Interface lead CB is in the off condition.
19	Set FUNCTION switch to OFF.
20	Set S8 toggle switch to ON.
	Requirement: LO relay operated. DS8 lamp lighted.
21	Set VERTICAL MONITOR switch to 6.
22	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 8.0 and 10.0V dc.
	Note: Interface lead CC is in the off condition.
23	Set FUNCTION switch to OFF.
24	Set VERTICAL MONITOR switch to 3.
25	Set RANGE switch to 10.
26	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 3.5 and 4.5V dc.
	Note: Interface lead BA connected to BB.
27	Set FUNCTION switch to OFF.
28	Using customer-provided telephone, call and request serving test center (STC) to send a tone of 2225 Hz to data set under test. Maintain voice communication.

STEP	PROCEDURE
29	Operate TST (TST1) key before 2225 Hz tone is sent. Hold key operated until the TST (TST1) lamp has lighted.
30	Release TST (TST1) key.
	Requirement: TST (TST1) lamp lighted. LO and TE relays released. M relay operated.
	Note: Data set is transmitting f_1, receiving f_2, and is in the test mode.
31	Set VERTICAL MONITOR switch to 6.
32	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 8.0 and 10.0V dc.
	Note: Interface lead CC is in the off condition.
33	Set FUNCTION switch to OFF.
34	Set VERTICAL MONITOR switch to 8.
35	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 8.0 and 10.0V dc.
	Note: Interface lead CF is in the off condition.
36	Set FUNCTION switch to OFF.
37	Set RANGE switch to 30.
38	Set VERTICAL MONITOR switch to 5.
39	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 9.5 and 11.5V dc.
	Note: Interface lead CB is in the off condition.
40	Set FUNCTION switch to OFF.
41	Operate TST (TST1) key and release.
	Requirement: TST (TST1) lamp extinguished.
	Note: If TST (TST1) lamp does not extinguish, wait approximately 10 seconds and operate TST (TST1) key again and release.
42	Set TP1 and TP2 TRIGGER switches to +/OPEN.

STEP	PROCEDURE
43	Set COUNTER switch to X10.
44	Set S8 toggle switch to OFF.
45	Set S3 toggle switch to ON.
	Requirement: DS3 lamp lighted. DS4 lamp lighted. DS5 lamp lighted. DS6 lamp lighted. Data set transmits 1270 Hz to STC. COUNTER indicates between 20 and 33.
	Note: CB turns on between 200 and 330 milliseconds after CA is turned on.
46	Set RANGE switch to 10.
47	Set METER POLARITY toggle switch to NOR.
48	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 7.0 and 10.0V dc. DS4 lamp lighted.
	Note: Interface lead CB is in the on condition.
49	Set FUNCTION switch to OFF.
50	Ensure that STC is still transmitting 2225 Hz to data set.
51	Set RANGE switch to 30.
52	Set VERTICAL MONITOR switch to 8.
53	Set FUNCTION switch to VOLT INT.
	Requirements: METER indicates between 11.0 and 14.0V dc. DS6 lamp lighted.
	Note: Interface lead CF is in the on condition.
54	Set FUNCTION switch to OFF.
55	Set VERTICAL MONITOR switch to 3 and METER POLARITY toggle switch to REV.
56	Set FUNCTION switch to VOLT INT.
	Requirement: METER indicates between 12.0 and 15.0V dc.
	Note: Interface lead BB is in the mark condition.
57	Set FUNCTION switch to OFF.
58	Set METER POLARITY toggle switch to NOR.
59	Set RANGE switch to 10.

STEP	PROCEDURE
60	Using customer-provided telephone, request STC to transmit a tone of 2025 Hz (f_2 space) to the data set.
61	When informed by STC via customer-provided telephone that tone has been transmitted, set FUNCTION switch to VOLT INT. ***Requirement:*** METER indicates between 7.0 and 10.0V dc. DS2 lamp lighted. ***Note:*** Interface lead BB is in the space condition.
62	Set FUNCTION switch to OFF.
63	Set RANGE switch to 30.
64	Set METER POLARITY toggle switch to REV.
65	Using customer-provided telephone, request STC to remove 2025 Hz (f_2 space) from line.
66	When informed by STC via customer-provided telephone that tone has been removed, set S7 toggle switch to OFF.
67	Set FUNCTION switch to VOLT INT. ***Requirement:*** METER indicates between 12.0 ad 15.0V dc. AN relay operated. ***Note:*** Interface lead is in the mark condition.
68	End of test. Inform STC and restore data set to normal operating conditions.

G. End-to-End Test (914B DTS)

3.15 The following equipment is listed for Test G and required at both transmit and receive terminals:

- 914B DTS

Before making any test connections, ensure that all programming pins are removed from the 914B DTS matrix. Insert only those pins shown in the test connection diagram (Fig. 7).

3.16 Lamp indications on 914B DTS denoting status of lead under test are shown in Table B.

TABLE B

END-TO-END TEST — LAMP INDICATIONS ON 914B DATA TEST SET

CONTROL SIGNAL LAMP	LEAD STATUS
DS1 ON	SPACE being applied to BA
DS1 Flutters	Data being applied to BA
DS2 ON	SPACE being applied on BB
DS2 Flutters	Data being received on BB
DS3 ON	ON voltage applied to CA (modulator on)
DS4 ON	CB on — clear to send
DS5 ON	CC on — data set ready
DS6 ON	CF on — carrier received
DS7 ON	CY on — data set in originate mode
DS8 ON	CX on — data set in local mode

3.17 ***Test Procedure:***

STEP	PROCEDURE
1	Establish voice communication between the two station locations.
2	At transmit terminal 914B DTS—
	Set switches and program matrix as shown in Fig. 7.
3	At receive terminal 914B DTS—
	Set switches and program matrix as shown in Fig. 7.
4	At transmit terminal data set—
	Strap MD to OR on TB1.
5	At receive terminal data set— Strap MD to AN on TB1.
6	At both transmit and receive terminals—
	Connect 914B DTS A connector to data set interface connector with cord provided.
7	At both transmit terminal and receive terminal 914B DTSs, operate POWER switch.

STEP	PROCEDURE
	Requirement: POWER lamp lighted. DS5 on. DS1 fluttering at transmit terminal.
8	At both transmit terminal and receive terminal—
	Operate S3 to ON.
	Requirement: DS3 lamp lighted. DS4 lamp lighted. DS6 lamp lighted.
9	At receive terminal 914B DTS—
	Set meter FUNCTION switch to PHASE ADJ.
10	Adjust PHASE control for a null meter indication.
11	Set meter FUNCTION switch to position other than PHASE ADJ.
12	Set COUNTER switch to BIT ERRORS.
13	Momentarily operate RESET key.
14	Momentarily operate WORD SYNC to MAN and note the time.
	Requirement: DS2 lamp fluttering at receive terminal.
15	After one minute, record number of errors and operate RESET key.
16	Repeat Step 15 until ten 1-minute error counts have been recorded.
	Requirement: Nine of the ten 1-minute periods must be error-free.
17	At transmit terminal of data set, move strap from OR to AN on TB1.
18	At receive terminal of data set, move strap from AN to OR on TB1.
19	Repeat Steps 9 through 11 and 13 through 16.
20	At transmit terminal 914B DTS, set TEST SET MODE switch to RCV SER.
	Note: Original transmit terminal is now receive terminal.
21	At original receive terminal 914B DTS, set TEST SET MODE switch to TRMT SER.
	Note: Original receive terminal is now transmit terminal.
22	Repeat Steps 9 through 16.
23	At transmit terminal of data set, move strap from OR to AN on TB1.

STEP	PROCEDURE
24	At receive terminal of data set, move strap from AN to OR on TB1.
25	Repeat Steps 9 through 11 and 13 through 16.
26	End of test. If data set has successfully completed all tests, restore to normal operating conditions.

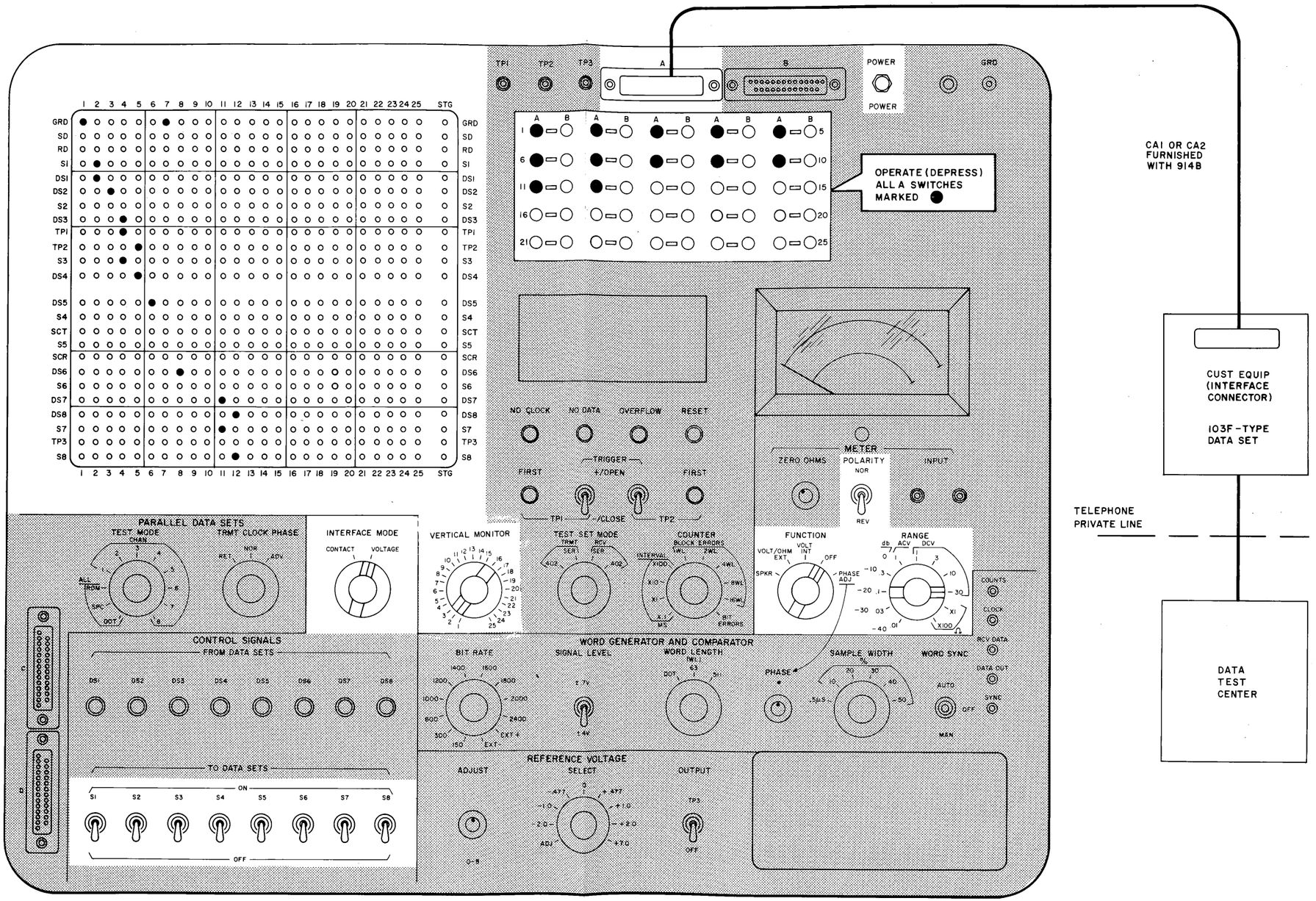

Fig. 6—Interface Test Using 914B Data Test Set

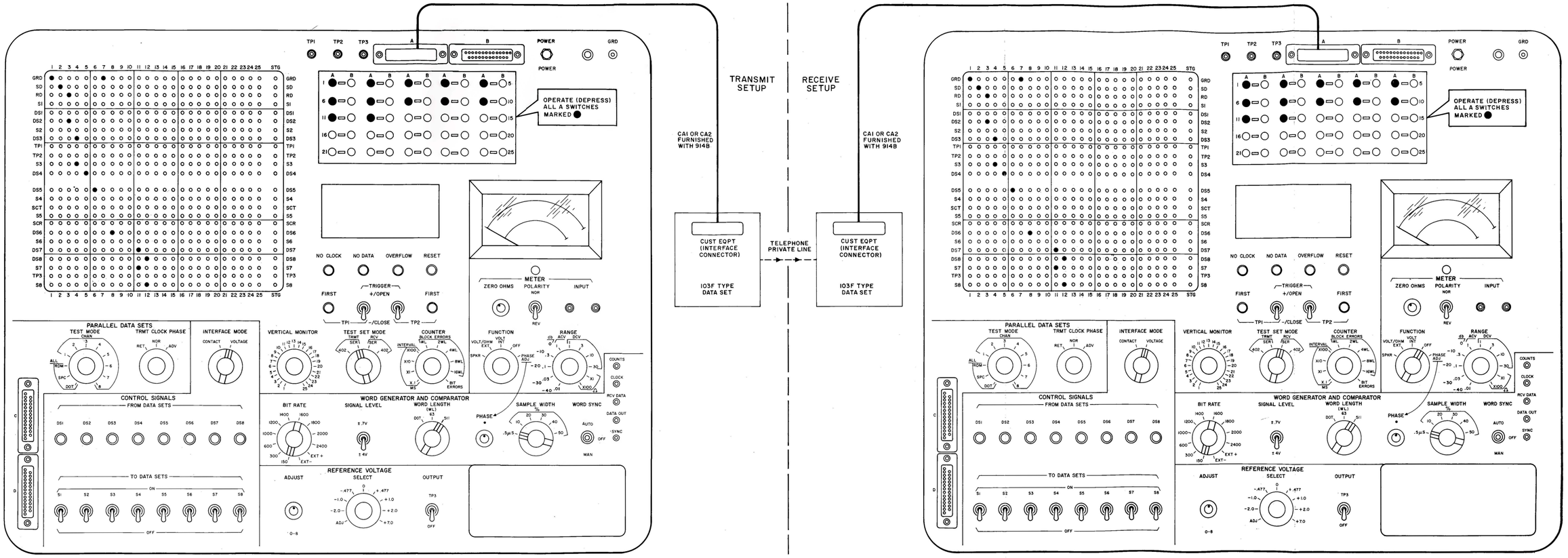

Fig. 7—End-to-End Test Using 914B Data Test Set