

DATA SET 202S
TRANSMITTER-RECEIVER
TEST PROCEDURES USING 921A DATA TEST SET

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1. GENERAL

1.01 This section contains test procedures using the 921A data test set (DTS) and the self-test capabilities of data set (DS) 202S. Test procedures using the 914-type DTS and the self-test capabilities of DS 202S are contained in Section 592-028-500.

These procedures are to be used when testing DS 202S on an initial installation or during a maintenance visit.

1.02 This section is reissued to add coverage for Version 2 of the 921A DTS. Since this reissue is a general revision, arrows normally used to indicate changes have been omitted.

1.03 Test circuitry built into DS 202S permits a local self test to be performed. The test circuitry also facilitates the remote test of the data set from a test center. Additional tests require the use of external test equipment such as the 921A DTS.

1.04 The 921A DTS (Fig. 1) is a portable, general purpose data test set that provides the serial testing capabilities of the 914C DTS and is compatible with the 914C DTS for the testing of serial data sets. The 921A DTS also provides additional testing capabilities that are described in Section 107-402-100. Input to the 921A DTS is made through a 20-button keyboard. A 32-character display provides operator prompting and test results.

2. INSTALLATION TESTS

2.01 This part provides the sequence in which tests are to be performed following installation of the data set. This test sequence provides a method of verifying that the installation is satisfactory.

2.02 Before proceeding with the tests, verify that the local loop meets the requirements specified in Section 314-205-501. Refer to Fig. 2 for the installation test sequence.

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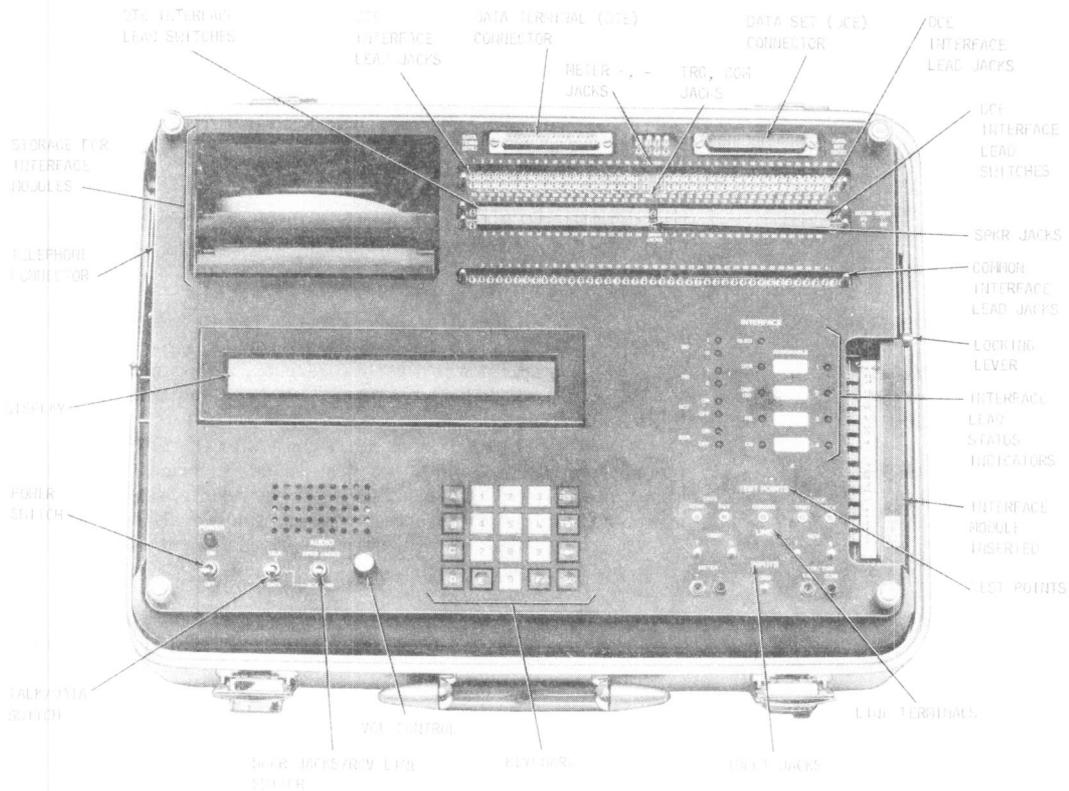


Fig. 1—921A Data Test Set—Front Panel

3. MAINTENANCE TESTS

3.01 This part provides the sequence in which tests are to be performed during a maintenance visit. This test sequence provides a method of isolating a trouble to the data set, the transmission facility, or the customer-provided equipment (CPE).

3.02 When a trouble report is received, a data test center (DTC) is responsible for isolating the trouble to the data set or transmission facility. The procedure for doing this is shown in Fig. 3.

3.03 If it is suspected that the trouble is in the data station equipment, a telephone company (telco) employee must be dispatched to conduct more extensive tests at the data station. The

following equipment should be taken on a trouble visit:

- Spare data set
- 921A DTS.

3.04 Refer to Fig. 4 for the sequence in which tests are to be performed by the telco employee at the data station. If the data set is replaced, the defective data set should be tagged with a description of the trouble, carefully packed, and returned to the service center for repair. Verify that the replacement data set is equipped with the proper options before placing the data set in service.

3.05 If the trouble persists, proceed as follows.

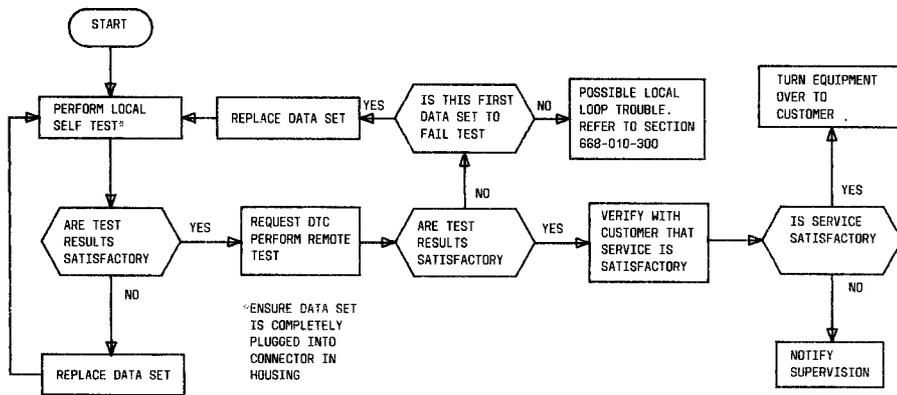


Fig. 2—Installation Test Sequence

- (a) Check that options installed in data set agree with those specified on service order.
- (b) Verify that CPE has been tested and is operating properly.
- (c) Check for physical damage to data station equipment.
- (d) Verify that all cords and connectors are properly connected.
- (e) Check for intermittent trouble in station wiring.
- (f) Verify that data set and CPE are connected to a common ground.
- (g) If trouble persists, request help from immediate supervisor.

4. TEST PROCEDURES

4.01 This part provides the procedures for the installation and maintenance tests.

A. Local Self Test

4.02 This test checks the data set transmitter and receiver. The customer interface is not checked. Test data generated by the data set is looped back internally from the transmitter output to the receiver input. The received data is compared

to the original data. Under normal conditions, all the data set indicator lamps are lighted; however, if an error is detected, the TM lamp goes off.

4.03 Perform the test as follows.

- (1) Ensure that data set is not transmitting or receiving data.
- (2) Firmly depress and hold LT switch for at least 15 seconds.

Note: If LT switch is depressed slowly, TM lamp may go off in a nondefective data set.

Requirement: TM lamp remains lighted while LT switch is depressed.

- (3) If requirement specified in (2) is not met, repeat (2) four more times.

Requirement: TM lamp remains lighted during all four repeats.

B. Remote Test

4.04 This test allows a test center to check the data set transmitter and receiver and the facilities connecting the data set and the test center. The customer interface is not checked.

4.05 Perform the test as follows.

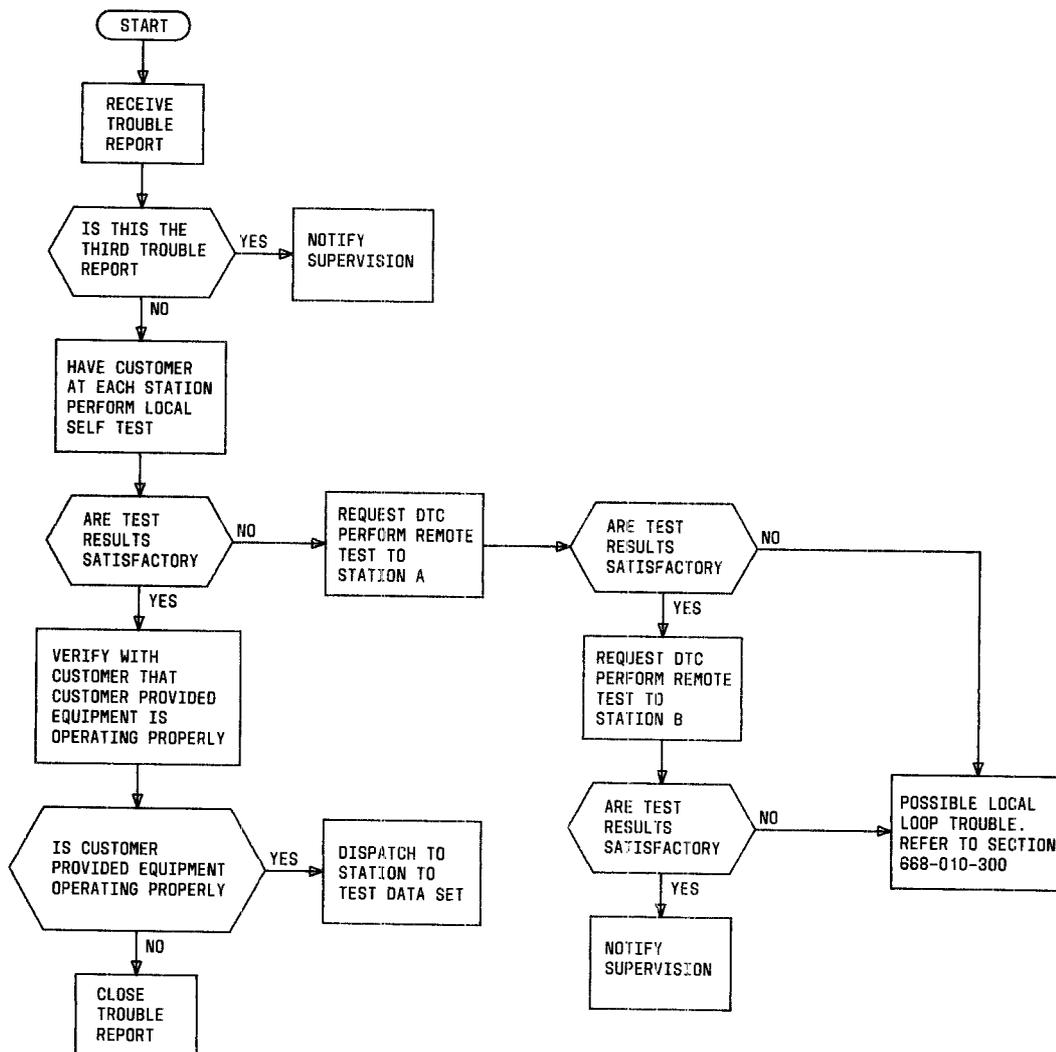


Fig. 3—Clearing Trouble Report

- (1) Contact test center and request a remote test.
- (2) When directed by test center, depress RT switch.

Requirement: On data set, all indicator lamps are lighted.

- (3) Test center performs remote test.

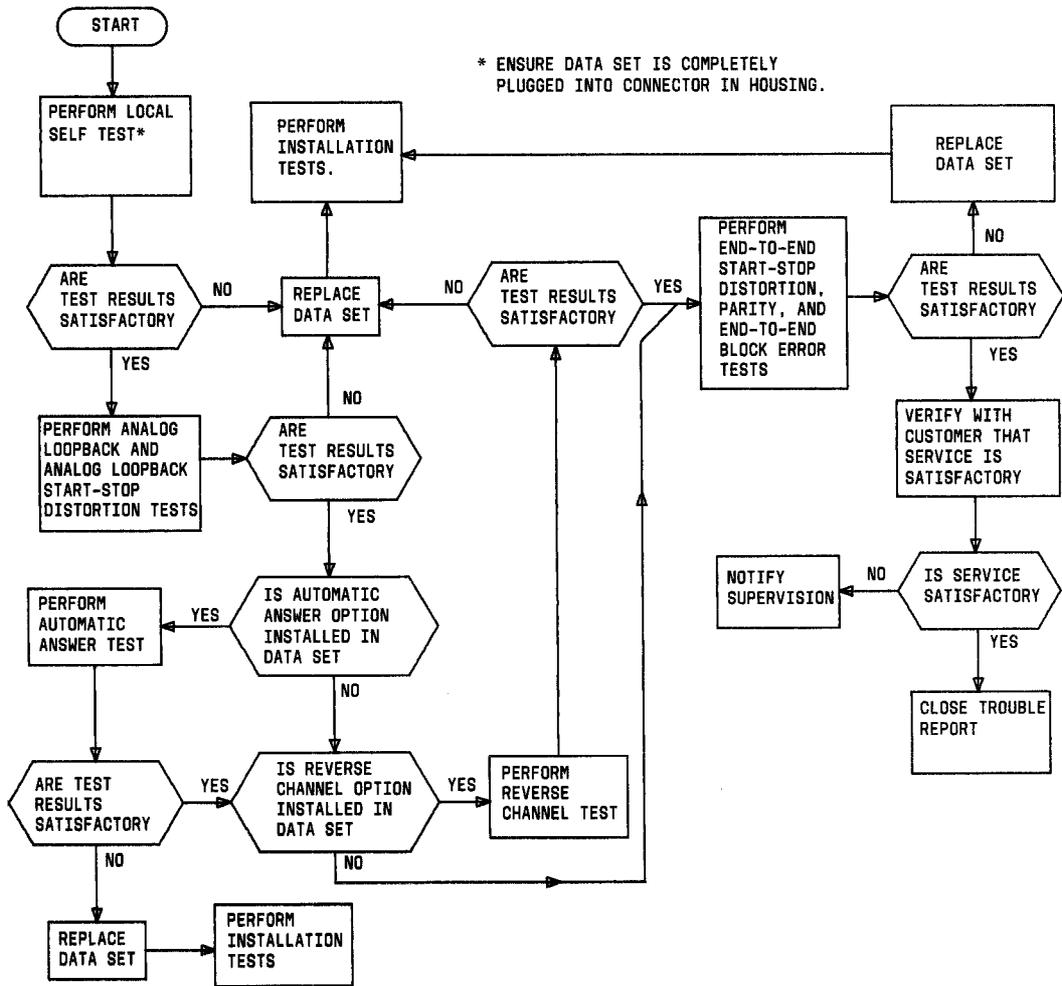


Fig. 4—Maintenance Test Sequence

- (4) When directed by test center, release RT switch.

Requirement: TM lamp goes off.

C. Initial Test Setup for 921A DTS

- 4.06** Perform the initial test setup for the 921A DTS when used to test DS 202S as follows.

STEP	ACTION	VERIFICATION
1	Connect data set to DTS using interface cable and EIA adapter cord provided with DTS. Note: The interface cable is equipped with two 37-pin connectors. The 6-inch adapter cord is equipped with a female 37-pin connector and a male 25-pin connector. Connect interface cable from DATA SET (DCE) connector on DTS to 37-pin connector on adapter cord. Insert 25-pin connector on adapter cord into customer interface connector on data set.	
2	Connect DTS to a 105- to 129-Vac 60-Hz power source.	
3	Apply power to data set.	ON lamp lights.
4	On front of DTS, set POWER switch to ON.	POWER lamp lights.
5	Press RST on keyboard. Note: If RST is pressed during a test, the test is ended and the DTS recycles to this step.	Display reads (briefly) version number of DTS. DTS then performs self tests. If DTS is defective, display reads— TEST FAILED. If DTS is satisfactory, display reads— DATA SET:
6	Remove EIA RS-232-C interface module from storage and ensure that all 25 interface module switches are in TERM position.	
7	On right side of DTS, ensure that locking lever is in OPEN position.	
8	Insert interface module into slot.	
9	Move locking lever to CLOSE position.	
10	On front of DTS, ensure that all 37 DCE interface lead switches are in NORM position except that switch 11 is in OPEN position.	
11	Enter 24 on keyboard. Note: To delete a wrong entry on keyboard during any test, press back arrow (⬅).	Display reads— DATA SET: 24

STEP	ACTION	VERIFICATION
12	Press GO.	Display reads— BIT RATE:
13	Enter 12.	Display reads— BIT RATE: 12
14	Press GO. <i>Note:</i> If GO or TST is pressed at an unauthorized point in a test, the test is ended and the DTS recycles to this step.	Display reads— TEST SEQ:
15	For Version 1 DTS, set DCE interface lead switch 20 to OPEN and connect a jumper wire between DCE interface lead jacks 9 and 20.	

D. Analog Loopback Test

4.07 In this test, an analog loopback block error run is performed, the CA-CB (RS-CS) interval is checked, and the CA-CF (RS-RLSD) interval is checked. The reverse channel is also checked if it is installed in the data set. The block error run checks the data set transmitter and receiver and the customer interface. Test data is generated by the 921A DTS and looped back internally from the data set transmitter output to the receiver

input. The received data is compared to the original data by the DTS. Data errors are indicated by the DTS display. The CA-CB interval check measures the interval between the time the request-to-send lead is turned **on** and the clear-to-send lead turns **on**. The CA-CF interval check measures the interval between the beginning of the line signal and the **on** condition of the received line signal detector lead.

4.08 Perform the test as follows.

STEP	ACTION	VERIFICATION
1	Ensure that initial test setup described in paragraph 4.06 has been performed. <i>Note:</i> If GO or TST is pressed at an unauthorized point in the following tests, the test in progress is ended and the DTS recycles to the start of that test (last preceding step that display read TEST SEQ:).	Display reads— TEST SEQ:

Block Error Run

2	On data set, depress AL switch.	TM lamp lights.
3	On DTS, enter 55.	Display reads— TEST SEQ: 55
4	Press GO.	Display reads— TRANSMITTER=? 1=921 2=914 3=903
5	Enter 1.	Display reads (briefly)— TRANSMITTER=1 1=921 2=914 3=903

STEP	ACTION	VERIFICATION
		Display then reads (briefly)— SELECT ERROR TEST Display then reads— D=DT 0=SP 1=MK 2=2047 5=511 6=63
6	Enter 5.	Display reads (briefly)— 511 BIT ERROR TEST Display then reads— 1=BIT ERRORS 2=BLOCK ERRORS
7	Enter 2.	Display reads— ????? BITS IN A BLOCK
8	Enter 01024.	Display reads (briefly)— 01024 BITS IN A BLOCK Display then reads— ???? SECONDS
9	Enter 0060. <i>Note:</i> To perform functions listed below, press associated key.	Display reads (briefly)— 0060 SECONDS Display then reads— BLK RCVD=0000 ERR=0000 From this point, display counts number of blocks received and number of blocks in error. If sync is lost during test, display flashes OSYN. If this occurs, test must be repeated by pressing A. At end of test, display reads TEST COMPLETE, total sync losses, total blocks received, and total blocks in error.

Requirement: No blocks in error.

KEY FUNCTION

- A Repeat test.
- B Display time remaining in test.
- C Clear display.
- D End test.
- E Inject 8 errors into data stream.
- F Force out-of-sync condition.

10 Press TST.

Display reads—
TEST SEQ:

Clear-to-Send Interval Test

11 Enter 30.

Display reads—
TEST SEQ: 30

12 Press GO.

Display reads RS-CS (CA-CB) interval in milliseconds.

STEP	ACTION	VERIFICATION
	<p>Note 1: Only the option actually installed in the data set need be tested.</p> <p>Note 2: To repeat test, press A.</p>	<p>Requirement:</p> <p>Option M—7 to 9 ms Option K—28 to 32 ms Option J—56 to 64 ms Option G—170 to 191 ms</p>
13	Press TST.	Display reads— TEST SEQ:
Received Line Signal Detector Interval Test		
14	Enter 31.	Display reads— TEST SEQ: 31
15	Press GO.	Display reads RS-RLSD (CA-CF) interval in milliseconds.
	<p>Note 1: Only the option actually installed in the data set need be tested.</p> <p>Note 2: To repeat test, press A.</p>	<p>Requirement:</p> <p>Option Q—5.7 to 8 ms Option N—19 to 22 ms</p>
16	Press TST.	Display reads— TEST SEQ:
Analog Loopback Reverse Channel Test (Does Not Apply to DS 2025-11)		
	<p>Note: If reverse channel is not installed in data set, omit Steps 17 through 27.</p>	
17	Enter 47 48 38 47.	Display reads— TEST SEQ: 47 48 38 47
18	Press GO.	Display reads (briefly)— TEST COMPLETE Display then reads— SW CONN: X=?? Y=??
19	Enter 05 09.	Display reads (briefly)— SW CONN: X=05 Y=09 Display then reads— SW CONN: X=?? Y=??
20	Enter 15 10.	Display reads (briefly)— SW CONN: X=15 Y=10 Display then reads SW CONN: X=?? Y=??

STEP	ACTION	VERIFICATION
21	Enter 16 11.	Display reads (briefly)— SW CONN: X=16 Y=11 Display then reads— SW CONN: X=?? Y=??
22	Enter 10 05. <i>Note:</i> Steps 19 through 22 conditioned DTS to control request-to-send (S1), secondary request-to-send (S2), and data terminal ready (S3), and to monitor secondary received line signal detector on ASSIGNABLE 1 indicator.	Display reads (briefly)— SW CONN: X=10 Y=05 Display then reads— SW CONN: X=?? Y=??
23	Press GO. <i>Note:</i> S1 is controlled by key 1; S2 is controlled by key 2; S3 is controlled by key 3. S4 is not used.	Display reads (briefly)— TEST INTERRUPTED For Version 2 and higher DTS: Display then reads (briefly)— CROSS CONNECTIONS MANUALLY SET Display then reads state of controlled switches. A typical display might read— S1=OFF S2=OFF S3=ON S4=OFF
24	Press keys 1, 2, and 3 until state of S1, S2, and S3 are as shown in verification. Disregard S4.	Display reads— S1=OFF S2=ON S3=ON S4=OFF <i>Requirement:</i> ASSIGNABLE 1 indicator lights.
25	Press key 1.	Display reads— S1=ON S2=ON S3=ON S4=OFF <i>Requirement:</i> ASSIGNABLE 1 indicator goes off.
26	Press keys 1 and 2.	Display reads— S1=OFF S2=OFF S3=ON S4=OFF <i>Requirement:</i> ASSIGNABLE 1 indicator remains off.
27	Press GO.	Display reads (briefly)— TEST INTERRUPTED. For Version 2 and higher DTS: Display then reads (briefly)— CROSS CONNECTIONS MANUALLY SET Display then reads (briefly)— TEST COMPLETE

STEP	ACTION	VERIFICATION
		Display then reads— TEST SEQ:
28	On data set, release AL switch.	TM lamp goes off.

E. End-to-End Block Error Test

4.09 This test checks the transmitter and receiver of both data sets and the facilities connecting the data sets. The customer interfaces are also checked. Identical test data is generated by 921A

DTSs at both data sets. This data is transmitted by one of the data sets and compared to the data generated by the DTS at the receiving data set. Data errors are indicated by the DTS display.

4.10 Perform the test as follows.

STEP	ACTION	VERIFICATION
1	Establish voice communication between the data stations and arrange to conduct an end-to-end block error test. <i>Note 1:</i> If distant station is not equipped with a 921A DTS, use a test set that provides at least one of the test patterns provided by the 921A DTS and use the same word length at both stations. <i>Note 2:</i> Procedure at transmitting station must be performed first.	

At transmitting station, perform Steps 2 through 6.

2	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
3	Enter 53.	Display reads— TEST SEQ: 53
4	Press GO.	Display reads (briefly)— SELECT ERROR TEST Display then reads— D=DT 0=SP 1=MK 2=2047 5=511 6=63
5	Enter 6.	Display reads— 63 BIT ERROR TEST
6	Place data set in data mode.	On DTS, DSR indicator lights (data set ready lead on) Display continues to read— 63 BIT ERROR TEST

STEP	ACTION	VERIFICATION
<i>At receiving station, perform Steps 7 through 16.</i>		
7	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads-- TEST SEQ:
8	Enter 54.	Display reads-- TEST SEQ: 54
9	Press GO.	Display reads-- TRANSMITTER=? 1=921 2=914 3=903
10	Enter code for DTS at transmitting station.	Typical display reads (briefly)-- TRANSMITTER=1 1=921 2=914 3=903 Display then reads (briefly)-- SELECT ERROR TEST Display then reads-- D=DT 0=SP 1=MK 2=2047 5=511 6=63
11	Enter 6.	Display reads (briefly)-- 63 BIT ERROR TEST Display then reads-- 1=BIT ERRORS 2=BLOCK ERRORS
12	Enter 2.	Display reads-- ???? BITS IN A BLOCK
13	Enter 01024.	Display reads (briefly)-- 01024 BITS IN A BLOCK Display then reads-- ???? SECONDS
14	Place data set in data mode.	On DTS, DSR indicator lights (data set ready lead on) Display continues to read-- ???? SECONDS
15	Enter 0900.	
	<i>Note:</i> To perform functions listed below, press associated key. Keys A through D function at receiving station only. Keys E and F function at transmitting station only.	
KEY	FUNCTION	
A	Repeat test.	Display reads (briefly)-- 0900 SECONDS
B	Display time remaining in test.	Display then reads-- BLK RCVD=0000 ERR=0000
C	Clear display.	From this point, display counts number of blocks received and number of blocks in error.
D	End test.	
E	Inject 8 errors into data stream.	
F	Force out-of-sync condition.	

STEP	ACTION	VERIFICATION
		<p>If sync is lost during test, display flashes OSYN. If this occurs, test must be repeated by pressing A.</p> <p>At end of test, display reads TEST COMPLETE, total sync losses, total blocks received, and total blocks in error.</p> <p>Requirement: Total blocks in error are less than 12.</p>
16	If requirement in Step 15 is not met, press A to repeat test one time.	
17	Perform the end-to-end block error test in the opposite direction. The receiving station now becomes the transmitting station.	

F. Automatic Answer Test

4.12 Perform the test as follows.

4.11 This test uses the 921A DTS to verify that the data set will automatically answer a call, go to the data mode, and end the call.

STEP	ACTION	VERIFICATION
1	Ensure that initial test setup described in paragraph 4.06 has been performed, except omit Step 15.	Display reads— TEST SEQ:
2	Enter 40.	Display reads— TEST SEQ: 40
3	Press GO.	Display reads— WAITING FOR RI
4	Place a call to data set from any convenient telephone set.	<p>Display reads— RINGING (during ringing period—ring indicator lead on). ASSIGNABLE 1 indicator follows ring indicator lead.</p> <p>After 3 complete ringing cycles, DTR indicator lights (data terminal ready lead on). After several seconds, DSR indicator lights (data set ready lead on). Display then reads— ANSWERED</p> <p>After several more seconds, DTR indicator goes off (data terminal ready lead off). Then DSR indicator immediately goes off (data set ready lead off).</p>

STEP	ACTION	VERIFICATION
		Requirement: Display reads (briefly)— TEST PASSED

G. Reverse Channel Test

4.13 This test checks the interface circuits used with the reverse channel. The 921A DTS and a test center are required for the test. The

test center must be capable of transmitting a 387-Hz tone to the data set and measuring the frequency of the tone received from the data set.

4.14 Perform the test as follows.

STEP	ACTION	VERIFICATION
1	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
2	Enter 39.	Display reads— TEST SEQ: 39
3	Press GO.	Display reads— SRLSD IS OFF
4	Contact test center and request test center to send a 387-Hz tone at -12 dBm at the O TLP.	Display reads— SRLSD IS ON After several seconds, display reads— SRS IS ON
5	Request test center to measure frequency of reverse channel tone received from data set.	Requirement: 377 to 397 Hz

H. Analog Loopback Start-Stop Distortion Test (Version 2 and Higher DTS)

4.15 This test uses the 921A DTS to measure three types of start-stop distortion, as follows.

- Peak distortion
- Number of "hits" above a specified threshold
- Average bias distortion.

4.16 Perform the test as follows.

STEP	ACTION	VERIFICATION
1	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
2	On data set, depress AL switch.	TM lamp lights.
3	On DTS, enter 52 79.	Display reads— TEST SEQ: 52 79
4	Press GO.	Display reads— PARITY=? (0=EVEN, 1=ODD)
5	Enter 0.	Display reads (briefly)— PARITY=0 (0=EVEN, 1=ODD)

STEP	ACTION	VERIFICATION
		Display then reads— TRMT=? (1=MAN 2=CONT)
6	Enter 2. Note: Ignore display, PRESS A TO START.	Display reads (briefly)— TRMT=2 (1=MAN 2=CONT) Display then reads— PRESS A TO START
7	Press GO.	Display reads (briefly)— TEST INTERRUPTED Display then reads— MODE=? (1=RCV 2=RCV & TRMT)
8	Enter 2.	Display reads (briefly)— MODE=2 (1=RCV 2=RCV & TRMT) Display then reads— HITS OVER ??% (MAX=49%)
9	Enter 29.	Display reads (briefly)— HITS OVER 29% (MAX=49%) Display then reads— ???? SECONDS
10	Enter 0090 and after about 2 seconds, press C. Note: To perform functions listed below, press associated key.	
	KEY FUNCTION	
	A Repeat test.	Display reads (briefly)— 0090 SECONDS
	B Display time remaining in test.	Display then reads— PEAK=00% HITS=00/29 AVG BIAS=00%
	C Clear display.	At end of test, display reads TEST COMPLETE and test results.
	D End test.	Requirements: 1. Less than 29% peak distortion. 2. Less than 01/29 hits. 3. Less than 12% average bias distortion.
11	On data set, release AL switch.	TM lamp goes off.

I. End-to-End Start-Stop Distortion Test

- Number of "hits" above a specified threshold
- Average bias distortion.

4.17 This test uses the 921A DTS to measure three types of start-stop distortion, as follows.

- Peak distortion

4.18 Perform the test as follows.

Note: A 911-type DTS can be used at the distant data station.

STEP	ACTION	VERIFICATION
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1	Establish voice communication between the data stations and arrange to conduct an end-to-end start-stop distortion test.	
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Note: Procedure at transmitting station must be performed first.

At transmitting station, perform Steps 2 through 8.

2	Ensure that initial test setup described in paragraph 4.06 has been performed.	
---	--	--

Display reads—
TEST SEQ:

3	Enter 52.	
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Display reads—
TEST SEQ: 52

4	Press GO.	
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For Version 1 DTS:
Display reads—
TRMT: 1=MAN 2=CONT

For Version 2 and higher DTS:
Display reads—
PARITY=? (0=EVEN 1=ODD)

5	For Version 2 and higher DTS, enter 0.	
---	--	--

Display reads (briefly)—
PARITY=0 (0=EVEN 1=ODD)
Display then reads—
TRMT=? (1=MAN 2=CONT)

6	Enter 2.	
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For Version 2 and higher DTS:
Display reads (briefly)—
TRMT=2 (1=MAN 2=CONT)

Display then reads—
PRESS A TO START

7	Place data set in data mode.	
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On DTS, DSR indicator lights (data set ready lead **on**)
Display continues to read—
PRESS A TO START

STEP	ACTION	VERIFICATION
8	Press A.	For Version 1 DTS: Display reads— SENDING ASCII MESSAGE For Version 2 and higher DTS: Display reads (briefly)— CS MUST BE ON TO TRANSMIT Display then reads— SENDING MESSAGE
<i>At receiving station, perform Steps 9 through 19.</i>		
9	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
10	For Version 1 DTS, enter 36.	Display reads— TEST SEQ: 36 RS=? (0 OR 1)
11	For version 1 DTS, enter 0.	Display reads— TEST SEQ: 36 RS=0 (0 OR 1)
12	For Version 1 DTS, press GO.	Display reads (briefly)— TEST COMPLETE Display then reads— TEST SEQ:
13	Enter 79.	For Version 1 DTS: Display reads— TEST SEQ: 79 HITS OVER ??%
14	For Version 2 and higher DTS, press GO.	Display reads— MODE=? (1=RCV 2=RCV & TRMT)
15	For Version 2 and higher DTS, enter 1.	Display reads (briefly)— MODE=1 (1=RCV 2=RCV & TRMT) Display then reads— HITS OVER ??% (MAX=49%)
16	Enter 35.	For Version 1 DTS: Display reads— TEST SEQ: 79 HITS OVER 35% For Version 2 and higher DTS: Display reads (briefly)— HITS OVER 35% (MAX=49%) Display then reads— ???? SECONDS
17	For Version 1 DTS, press GO.	Display reads— ???? SECONDS

STEP	ACTION	VERIFICATION
18	Place data set in data mode.	On DTS, DSR indicator lights (data set ready lead on) Display continues to read— ??? SECONDS
19	Enter 0180 and after about 2 seconds, press C. Note: To perform functions listed below, press associated key.	
	KEY FUNCTION	
	A* Repeat test.	Display reads (briefly)— 0180 SECONDS
	B* Display time remaining in test.	Display then reads—
	C Clear display.	PEAK=00% HITS=00/35 AVG BIAS=00%
	D* End test.	At end of test, display reads TEST COMPLETE
	* Version 2 and higher DTS.	and test results.
		Requirements:
		1. Less than 45% peak distortion.
		2. Less than 04/45 hits.
		3. Less than 15% average bias distortion.
20	Perform the end-to-end start-stop distortion test in the opposite direction. The receiving station now becomes the transmitting station.	

J. Parity Test

4.20 Perform the test as follows.

4.19 This test uses the 921A DTS to check the number of parity errors that occur in transmitting an ASCII format message.

Note: A 911-type DTS can be used at the distant data station.

STEP	ACTION	VERIFICATION
1	Establish voice communication between the data stations and arrange to conduct a parity test. Note: Procedure at transmitting station must be performed first.	

At transmitting station, perform Steps 2 through 8.

2	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
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STEP	ACTION	VERIFICATION
3	Enter 52.	Display reads— TEST SEQ: 52
4	Press GO.	For Version 1 DTS: Display reads— TRMT: 1=MAN 2=CONT For Version 2 and higher DTS: Display reads— PARITY=? (0=EVEN 1=ODD)
5	For Version 2 and higher DTS, enter 0.	Display reads (briefly)— PARITY=0 (0=EVEN 1=ODD) Display then reads— TRMT=? (1=MAN 2=CONT)
6	Enter 2.	For Version 2 and higher DTS: Display reads (briefly)— TRMT=2 (1=MAN 2=CONT) Display then reads— PRESS A TO START
7	Place data set in data mode.	On DTS, DSR indicator lights (data set ready lead on) Display continues to read— PRESS A TO START
8	Press A.	For Version 1 DTS: Display reads— SENDING ASCII MESSAGE For Version 2 and higher DTS: Display reads (briefly)— CS MUST BE ON TO TRANSMIT Display then reads— SENDING MESSAGE
<i>At receiving station, perform Steps 9 through 15.</i>		
9	Ensure that initial test setup described in paragraph 4.06 has been performed.	Display reads— TEST SEQ:
10	Enter 57.	Display reads— TEST SEQ: 57 ? (0=EVEN 1=ODD)
11	Enter 0.	Display reads (briefly)— TEST SEQ: 57 0 (0=EVEN 1=ODD)

STEP	ACTION	VERIFICATION
		Display then reads--
12	Press GO.	Display reads-- PRESS A TO START
13	Place data set in data mode.	On DTS, DSR indicator lights (data set ready lead on) Display continues to read-- PRESS A TO START
14	Press A.	Display reads-- PARITY ERRORS=00 From this point, display counts number of parity errors.
15	Conduct test for about 3 minutes.	Requirement: Less than 4 parity errors.
16	Perform the parity test in the opposite direction. The receiving station now becomes the transmitting station.	

5. REFERENCES

5.01 Additional information concerning the testing of DS 202S is contained in the following publications.

SECTION	TITLE	SECTION	TITLE
		592-028-150	Data Set 202S--Transmitter-Receiver--Supplementary Information
		592-028-200	Data Set 202S--Transmitter-Receiver--Installation and Connections
107-402-100	921A Data Test Set--Description and Operation	592-028-500	Data Set 202S--Transmitter-Receiver--Test Procedures
314-205-501	Data Systems--DATAPHONE® Service and Data Access Arrangements on Direct Distance Dialing Network--Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines	680-010-300	Data Systems--DATAPHONE® Service on Direct Distance Dialing Network--Data Test Center--Trouble Analysis Procedures
		999-100-141	Data Set 202S--How to Operate Manual
592-028-100	Data Set 202S--Transmitter-Receiver--Description and Operation	5.02	Detailed information concerning DS 202S is contained in CD- and SD-1D238-01.