NO NEED TO CALL THE DATA TEST CENTER!!!

Data set 202T can be tested with the Automatic Data Test System (ADTS) using the DIVA feature and TOUCH-TONE® signalling (from a rotary dial phone, use a KS-21799-L1 tone coupler).

DDD	TEST FUNCTION
	LB RT ER DL
X	X

Use local instructions for DIVA access.

Test commands are entered into ADTS by letters and numbers on the TOUCH-TONE dial. To enter letters depress the number sign (#), then depress the TOUCH-TONE key that has the desired alpha character on it. Then depress the digit (1, 2, or 3) corresponding to the position of the alpha character on the TOUCH-TONE key.

Examples:

202C10	202#2310*
401J	401#51*
208B	208#22*

FUNCTION	CHARACTERS
NO	0*
YES	1*
RESULTS	7*
LIST ALL TEST FUNCTIONS	8*
REPEAT LAST MESSAGE	#*
DIGITAL LOOPBACK (DL)	35*
ERROR RUN (ER)	37*
LOOPBACK TEST (LB)	52*
STOP AND DISCONNECT	#63*
STOP PRESENT FUNCTION	#73*
REMOTE TEST (RT)	78*

For fast test of above, depress 3 before function, eg, 352*. Be sure to use #63* to disconnect in every case.

For more details, see Sections 590-010-500 and 668-600-102.

DATA SET 202T-TYPE
TRANSMITTER-RECEIVER
TEST PROCEDURES AND MAINTENANCE

CONTENTS PAGE

1. GENERAL

1.01 This section contains information concerning procedures to be used when testing data set (DS) 202T-type during an installation or while investigating a trouble report.

1.02 This section is reissued to add information pertaining to DS 202T-L1A. Due to extensive revision, arrows ordinarily used to denote changes have been omitted.

1.03 This section is divided into four additional parts: Installation Tests, Maintenance Procedures and Tests, Supplementary Test, and Test Procedures. The part designated Test Procedures provides information on, and procedures for, all the tests described in this section. This includes both the tests which require no test equipment ***and*** those requiring test equipment such as a 914-type DTS. The parts designated Installation Tests and Maintenance Tests give the proper sequence in which to perform the various tests when installing the data set or when investigating a trouble report. The supplementary test is not required for installation or maintenance under normal circumstances.

Caution: If the data set is taken out of the housing, handle by the nonconductive surfaces only. Otherwise, damage to the components may result.

2. INSTALLATION TESTS

2.01 This part provides the sequence in which tests are to be performed following an installation. Before proceeding with the test, verify that the channel is installed and meets requirements

specified in the section entitled Voice Bandwidth Private Line Data Circuits—Tests and Requirements (314-410-500). Refer to Fig. 1 for the sequence of tests to be performed for 2-wire installations and to Fig. 2 for the sequence of tests to be performed for 4-wire installations.

2.02 The installation tests are as follows:

- Local self test
- Remote test
- End-to-end test
- Remote test to distant end
- Data distortion test.

3. MAINTENANCE PROCEDURES AND TESTS

Maintenance Procedures

3.01 When investigating a trouble report, proceed as directed in Fig. 3 (2-wire) or Fig. 4 (4-wire).

3.02 If it becomes necessary to dispatch a telephone company (telco) employee to the defective data set location, the telco employee should take along the following:

- 914C data test set (DTS) ***or*** 914B and 903 DTS
- Spare DS 202T-type.

3.03 The data set is tested as directed. If the data set is replaced, the defective data set should be tagged with a tag describing the nature of the trouble, carefully packed, and returned to a service center for repair. After the data set has been replaced, verify with the customer that service has been restored.

Caution: Handle the circuit pack by the nonconductive surfaces only, otherwise, certain circuit components may be damaged.

3.04 If the trouble persists, proceed as follows:

(a) Check that options in the data set agree with the service order.

(b) Check that compatible options are used in local and remote data sets. Refer to Section 592-031-200.

(c) Verify that the customer-provided equipment (CPE) has been tested and is operating satisfactorily.

(d) Check that all the cords and connectors are properly connected.

(e) Check for physical damage.

(f) Check that the CPE and the data set are connected to a common ground.

(g) If the trouble cannot be cleared, request help from immediate supervisor.

Maintenance Tests

3.05 This part provides the sequence in which tests are to be performed during a trouble visit. The procedure provides a method of isolating a trouble to either the data set or the transmission facility. It is assumed that the maintenance procedures outlined above have been followed prior to dispatching the craft employee. Refer to Fig. 5 for the sequence of tests to be performed for a 2-wire data set and to Fig. 6 for the sequence of tests to be performed for a 4-wire data set.

3.06 The maintenance tests are as follows:

- Local self test
- Analog loopback test with 914-type DTS
- Remote test
- End-to-end test
- Remote test to distant end
- Remote test from distant end
- Data distortion test
- Reverse channel test.

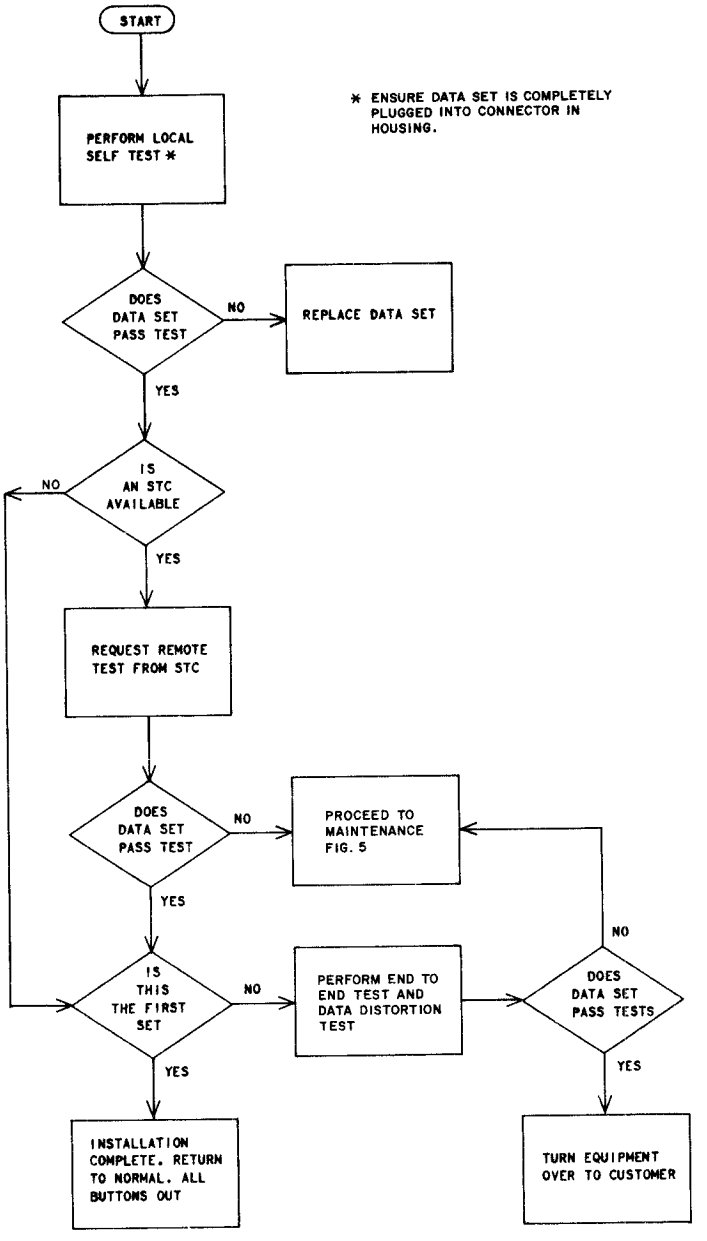


Fig. 1—2-Wire Installation Test Sequence

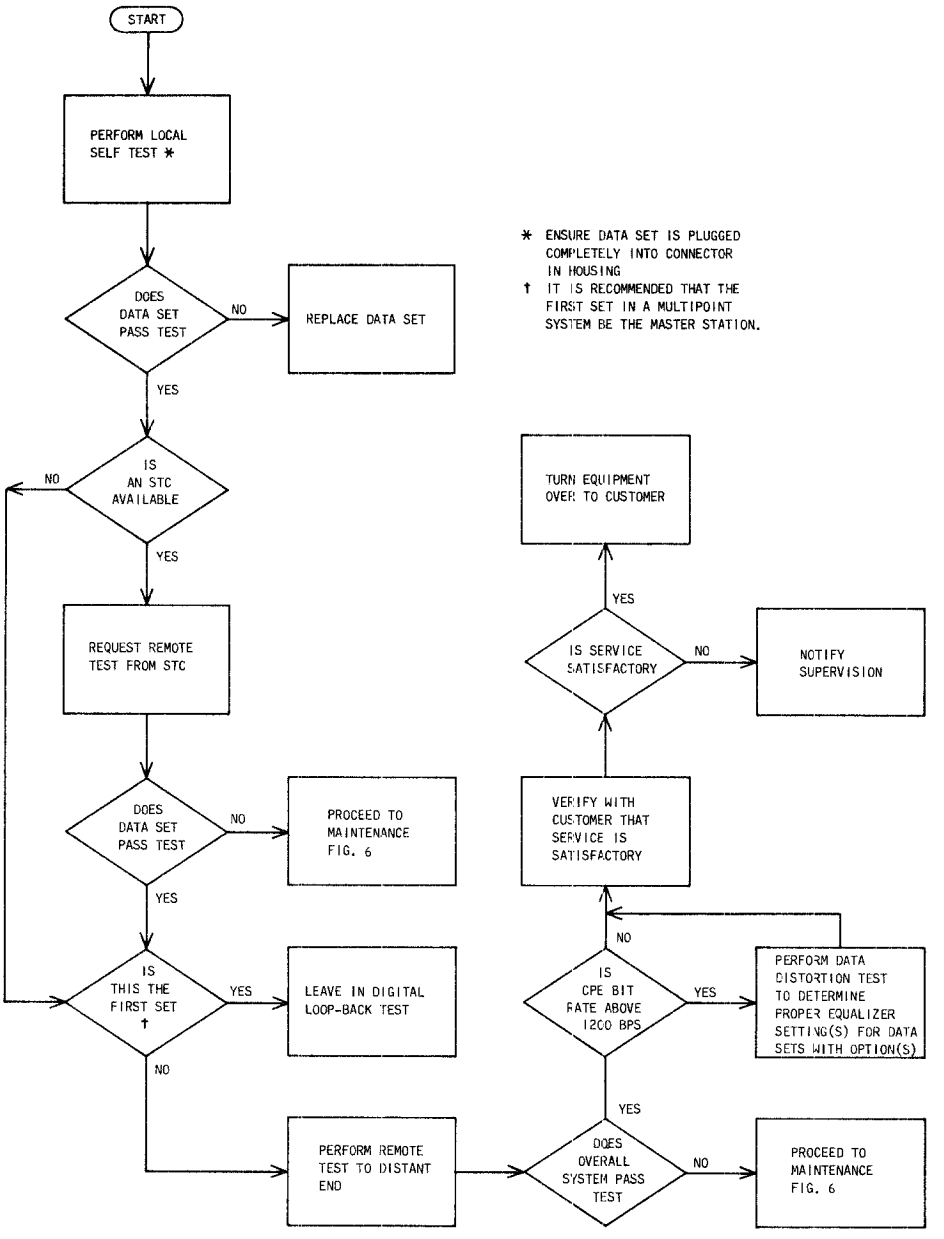


Fig. 2—4-Wire Installation Test Sequence

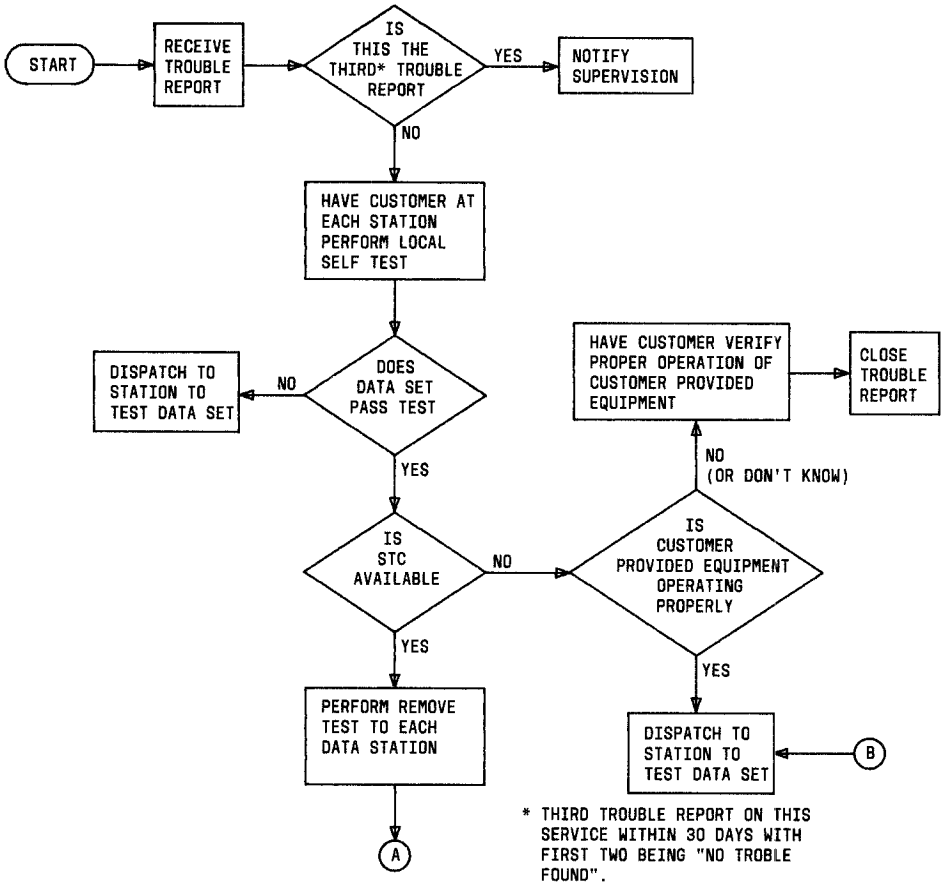


Fig. 3—2-Wire Maintenance Flowchart (Sheet 1 of 2)

4. SUPPLEMENTARY TEST

4.01 The ground noise test is not called for on the installation or maintenance flowchart and should be referred to as required.

5. TEST PROCEDURES

5.01 This part contains various methods of testing DS 202T-type. Test circuitry built into the data set permits testing the data set in a local self test, analog loopback, and a remote test mode. Additional interface tests are provided which require the use of a 914-type DTS.

A. Local Self Test

5.02 Depress the nonlocking LT key on the front of the data set to initiate the local self test. A repeating 63-bit pseudo-random word is generated at 1547 bps and looped from the transmitter to the receiver through an attenuating circuit. The word received by the receiver is compared to the original word. Under normal conditions, all the

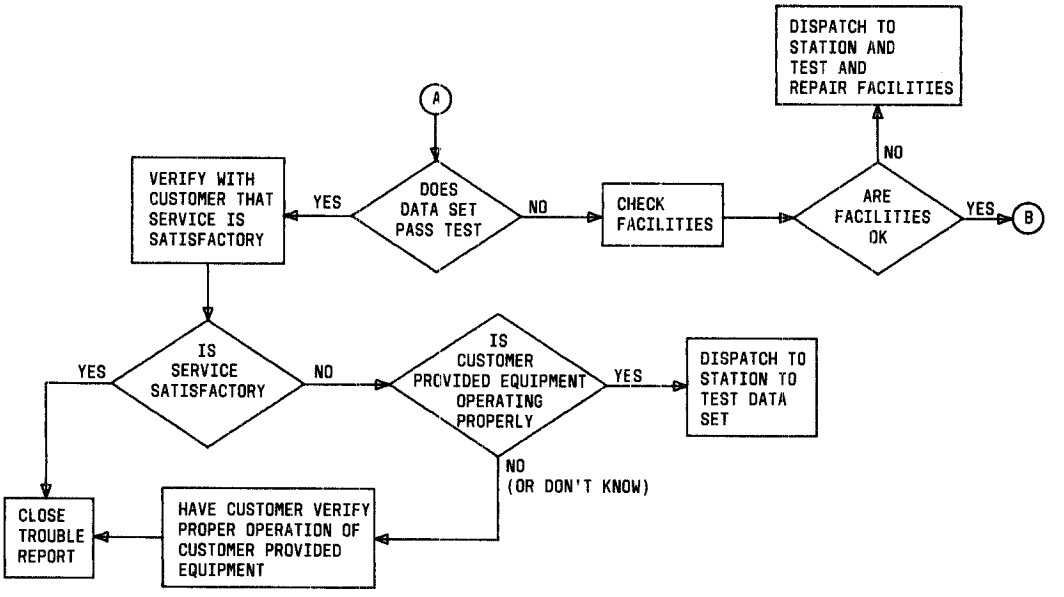


Fig. 3—2-Wire Maintenance Flowchart (Sheet 2 of 2)

indicators are lighted; however, in the event an error is detected, the TM indicator is off.

Note: All customer leads are made inoperative and are not tested.

Perform the test as follows:

(1) Ensure that the data set is not transmitting or receiving data.

(2) Firmly depress and hold the LT key for approximately 15 seconds. If the LT key is depressed slowly, the TM indicator may turn off in a nondefective data set.

Requirement: All data set indicator lamps remain lighted while the LT key is depressed.

(3) If requirement specified in (2) is not met, repeat the test four additional times.

Requirement: All data set indicator lamps remain lighted during the four additional trials.

B. Remote Test (2-Wire Data Set)

5.03 The remote test mode for 2-wire operation allows the attendant at the serving test center (STC) to test all the data set circuitry except the customer interface. After contacting the STC, depress the RT button and observe that all status indicator lamps light. The remaining operations are performed by the STC. To release the data set from the remote test mode, depress the RT button and it will return to the out position.

Note: All customer leads are made inoperative and are not tested. All data set indicator lamps are lighted.

C. Remote Test From Distant End (4-Wire Data Set)

5.04 The 4-wire remote test allows 4-wire data sets to be tested from the STC. The data set acts as a repeater and sends back to the STC the signal it receives from the STC. To place the data set in this digital loopback mode, depress the locking RT button. The remaining operations are performed by the STC. To release the data set

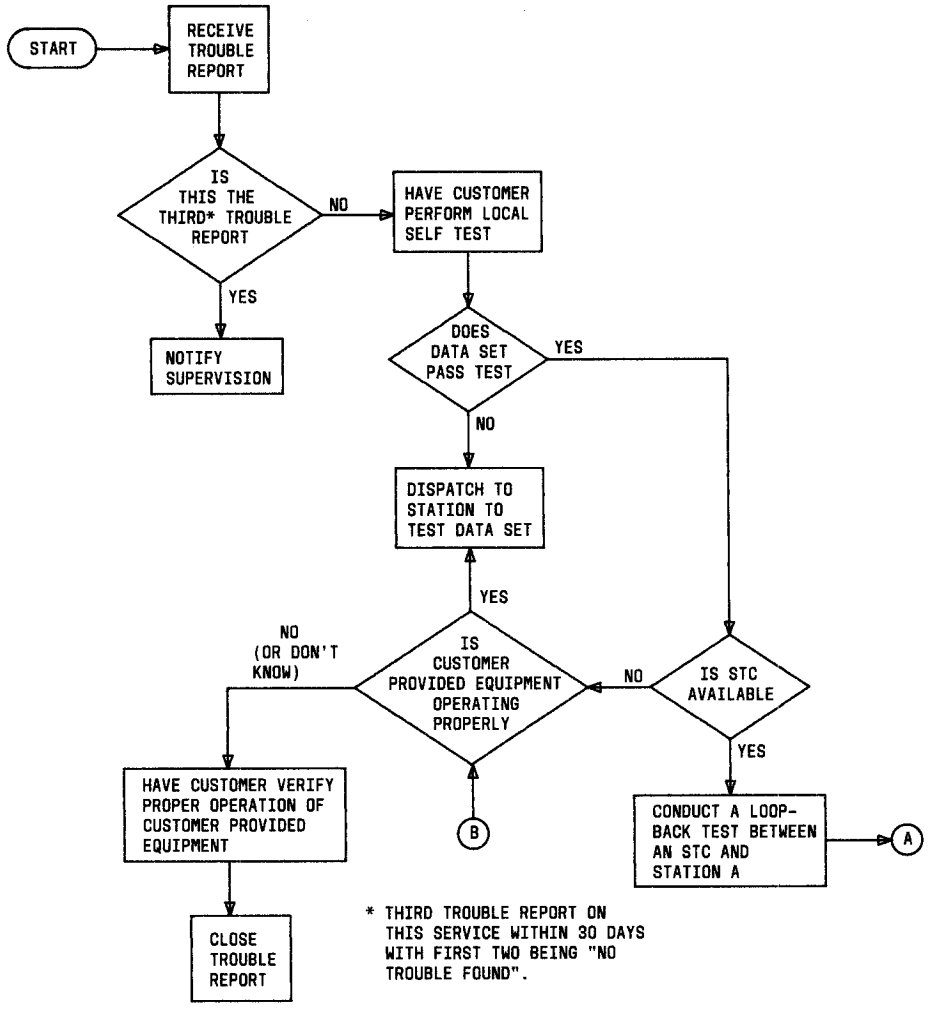


Fig. 4—4-Wire Maintenance Flowchart (Sheet 1 of 2)

from the remote test mode, depress the RT button and it will return to the out position.

Note: All customer interface leads are made inoperative and are not tested. Only the ON and TM data set indicator lamps are lighted.

D. Remote Test to Distant End (4-Wire Data Set)

5.05 In the following test, the 914-type DTS is used to transmit a random word to the distant-end data set. The distant-end data set is placed in the digital loopback mode (by depressing the RT button) and transmits the word back to

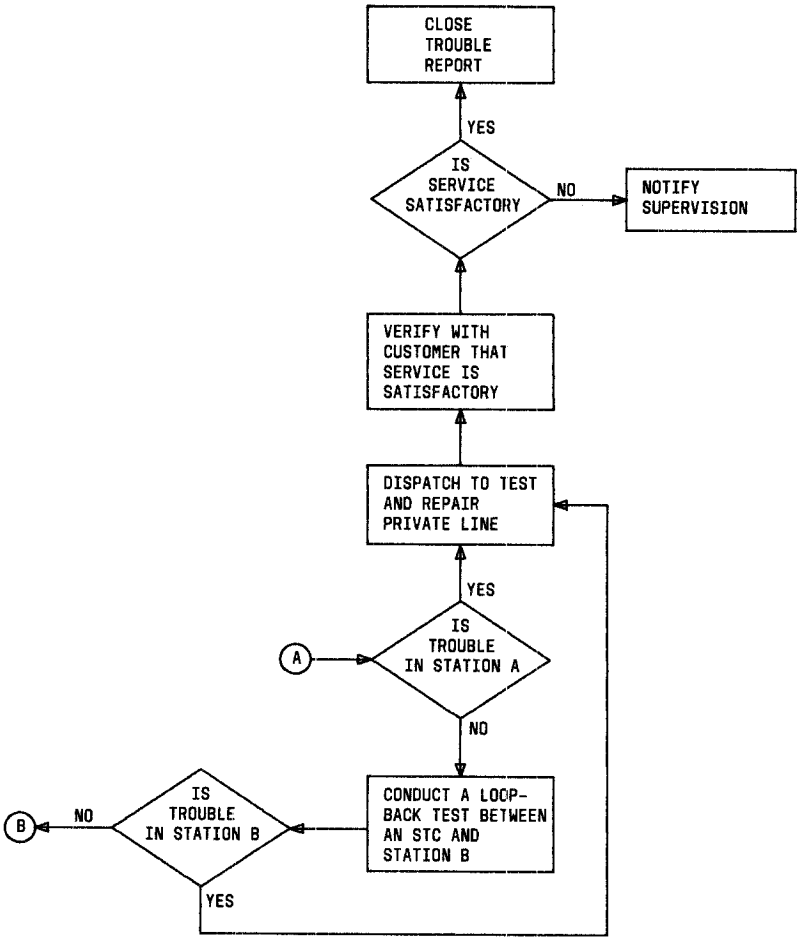


Fig. 4—4-Wire Maintenance Flowchart (Sheet 2 of 2)

the local data set. At the local data set, the 914-type DTS checks the received word for errors. Test equipment required is as follows:

1—914C data test set

or

1—914B data test set ***and***

1—903-type data test set.

5.06 Set up test equipment as shown in Fig. 7 ***except for the SAMPLE WIDTH switch which must be set to the 0.5 μs position.*** The test is performed as follows:

(1) Disconnect the customer-provided equipment (CPE) and connect the 914-type DTS to the data set.

(2) Insert red pins in the matrix and set switches on the test equipment as shown in Fig. 7.

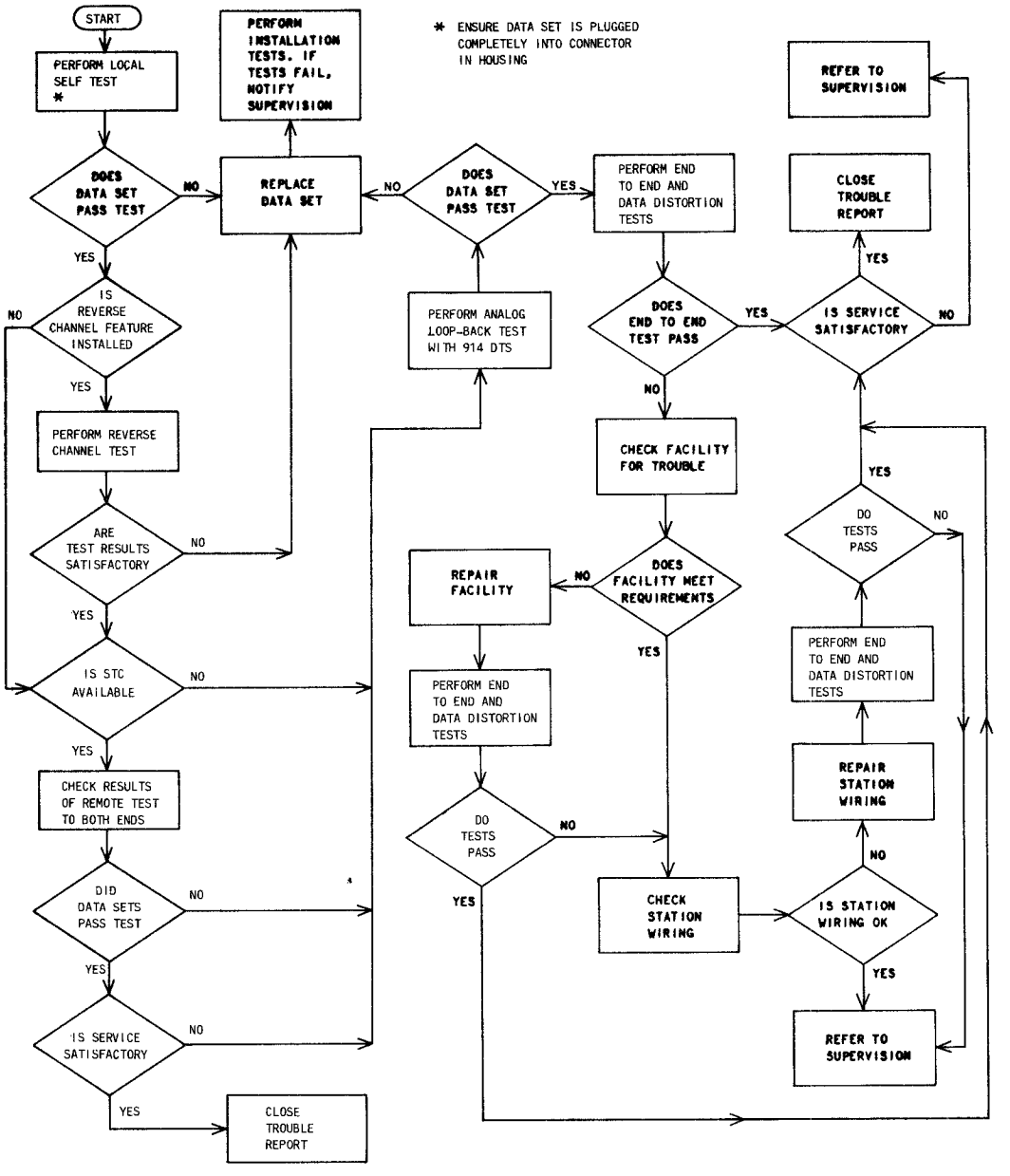


Fig. 5—2-Wire Maintenance Test Sequence

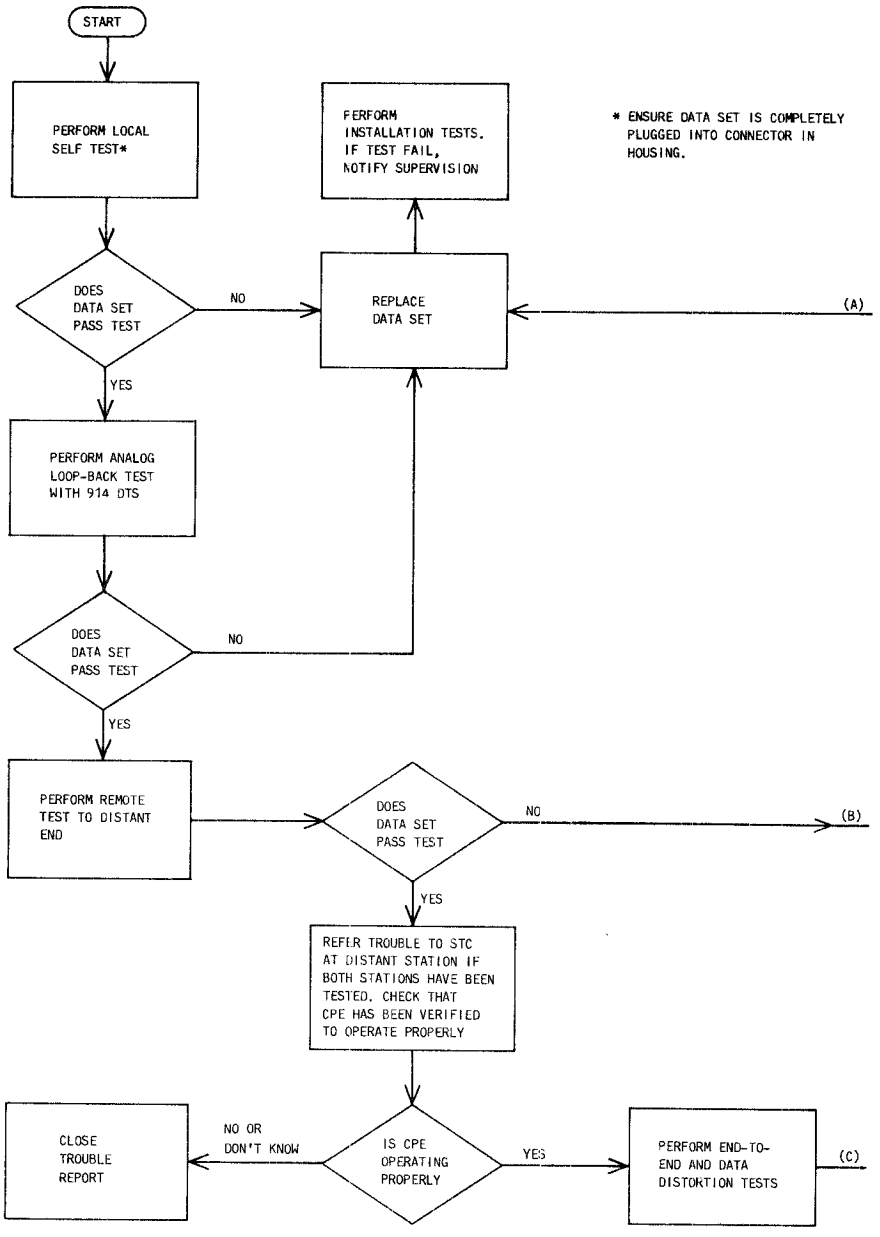


Fig. 6—4-Wire Maintenance Test Sequence (Sheet 1 of 3)

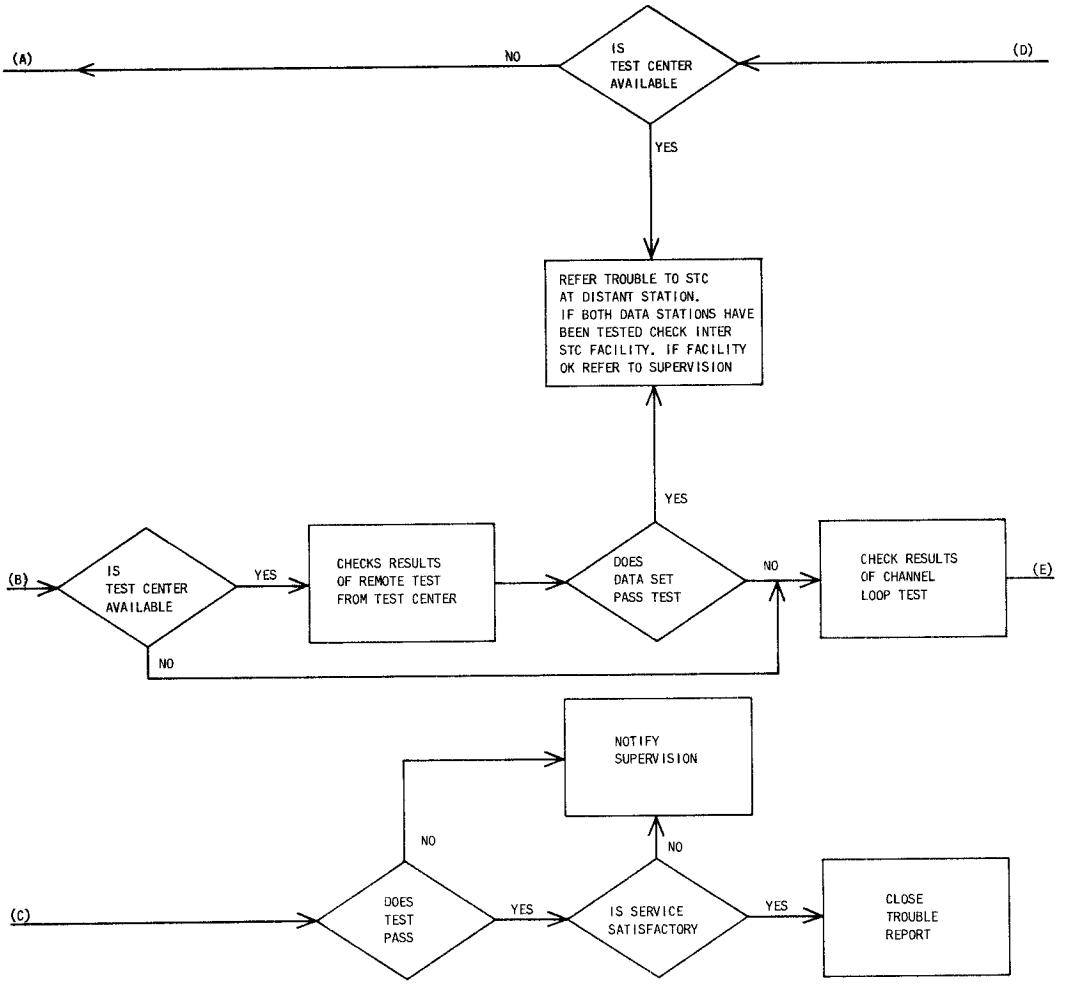


Fig. 6—4-Wire Maintenance Test Sequence (Sheet 2 of 3)

(3) Contact the distant-end data station and have the RT button on the data set pushed in.

(4) Apply power to the data set and to the test equipment.

(5) Operate switch S1 to ON. (Depress and release START button on 903 DTS if it is used.)

Requirement: DS1 and DS2 lamps are lighted.

(6) On the 914 DTS, set the FUNCTION switch to PHASE ADJ.

(7) Adjust the PHASE control to zero the meter.

(8) Move the FUNCTION switch to OFF.

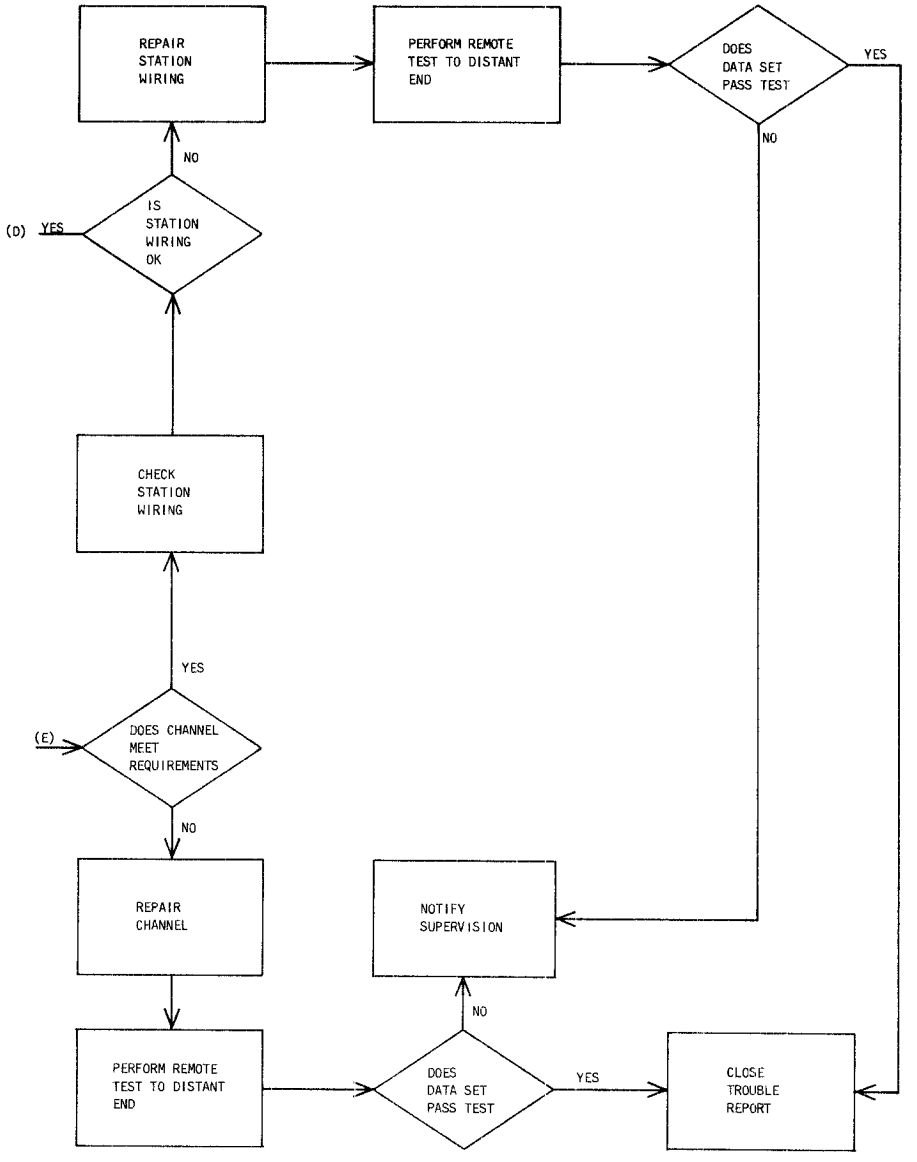
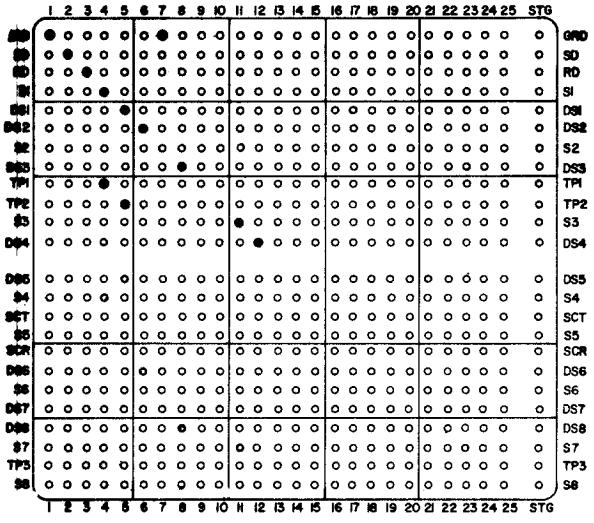
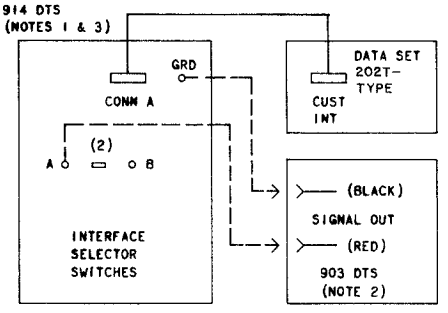


Fig. 6—4-Wire Maintenance Test Sequence (Sheet 3 of 3)



914 DTS MATRIX



1. SET SWITCHES ON 914 DTS AS FOLLOWS:

SWITCH	SETTING
INTERFACE MODE	VOLTAGE
TEST SET MODE	SER (914C DTS) REC. SER (914B DTS)
COUNTER	BIT ERRORS
RCV BIT RATE	1200
RCV WORD LENGTH	63
TRANSMIT BIT RATE (914C)	1200
TRANSMIT WORD LENGTH (914C)	63
SIG LEV	±4V
FUNCTION	OFF
WORD SYNC	OFF
SAMPLE WIDTH	30%
TP1 TRIGGER	+/OPEN
TP2 TRIGGER	+/OPEN
RANGE	DCV-30
POLARITY	NOR
VERTICAL MONITOR	9
SWITCH S1, S3	OFF
INTERFACE SELECTOR SWITCHES	ALL OPERATED (DEPRESSED) EXCEPT 2A WHEN 903 DTS IS USED

2. SET SWITCHES ON 903 DTS AS FOLLOWS
(NOT REQUIRED FOR REVERSE CHANNEL TEST)

SWITCH	SETTING
BIT RATE	1200
TRIGGER	(+) POSITIVE
RANDOM DOT	RANDOM

3. 914 DTS INDICATOR LAMPS AND SWITCHES CORRESPOND TO INTERFACE LEADS AS FOLLOWS:

SWITCH	LAMP	INTERFACE LEAD
S1		REQUEST TO SEND
	DS1	CLEAR TO SEND
	DS2	DATA SET READY
S3		SECONDARY REQUEST TO SEND
	DS4	SECONDARY RECEIVED LINE SIGNAL DETECTOR
	DS3	RECEIVED LINE SIGNAL DETECTOR

Fig. 7—Equipment Setup for Remote Test to Distant End, Analog Loopback Test and Reverse Channel Test

(9) Operate WORD SYNC switch to MAN and release when counter stops.

(10) Reset the counter on the 914-type DTS.

(11) Conduct a 1-minute error run. Observe the counter at the end of 1 minute and record errors. Move switch S1 to OFF.

(12) Repeat (5) and (9) through (11) until 10 error runs have been conducted. Disregard the 1-minute error run which has the most errors.

Requirement: Total errors for the other 9 error runs are less than 5.

(13) Upon completion of the test, disconnect the data set from the 914 DTS. Call the distant-end data station and have the RT switch returned to the out position. Verify that data set switches at both data sets are in the out position.

E. Analog Loopback Test

5.07 In this series of tests, an analog loopback error run is conducted and the response times for the clear-to-send (CB) and received line signal detector (CF) interface circuits are measured. With the data set in the analog loopback mode (AL button pushed in), data signals applied to the transmitted data interface lead are processed through the transmitter, looped back through an attenuator to the receiver where they are demodulated, and appear on the received-data lead. All interface leads are operative except data-set-ready which is held ***off*** by DS 202T-L1. The state of data-set-ready during analog loopback is a customer option on DS 202T-L1A.

5.08 The following test equipment is required for the test:

1—914C data test set

or

1—914B data test set ***and***

1—903-type data test set.

5.09 ***Analog Loopback Error Run:*** This test verifies that the data set will transmit and receive a 63-bit random word error free for 5 minutes. Prior to performing the error run, the power supply voltages are measured. The test is performed as follows:

(1) Disconnect the CPE and connect the 914-type DTS to the data set.

(2) Connect the 903-type DTS (if used) to the 914-type DTS as shown in Fig. 7.

(3) Insert red pins in the matrix of the 914-type DTS as shown in Fig. 7.

(4) Set switches on the test equipment as shown in the tables of Fig. 7.

(5) Apply power to the data set and to the test equipment.

(6) Depress the locking AL button on the data set.

(7) On the 914-type DTS, move switch S1 to ON (request-to-send lead is ***on***). Depress and release the START button on the 903-type DTS (if used).

Requirement: DS1 lamp is lighted.

(8) Move the FUNCTION switch to VOLTS INT.

Requirement: +12 to +17 volts.

(9) Move the FUNCTION switch to OFF, the VERTICAL MONITOR switch to 10, and the METER POLARITY switch to REV.

(10) Move the FUNCTION switch to VOLTS INT.

Requirement: -12 to -17.5 volts.

(11) On the 914-type DTS, set the FUNCTION switch to PHASE ADJ.

(12) Adjust the PHASE control to zero the meter.

(13) Move the FUNCTION switch to OFF.

(14) Operate the WORD SYNC switch to MAN on the 914-type DTS and release when the counter stops.

(15) Reset the counter on the 914-type DTS.

(16) Allow the test to continue for 5 minutes.

Requirement: No errors.

(17) If the clear-to-send (CB) response time is to be measured, proceed to 5.10. Otherwise, restore equipment to pretest condition.

5.10 ***Clear-to-Send Response Test:*** In this test, the response time of the clear-to-send circuit is measured. Although requirements are given for the four possible options, the data set under test need not be checked for proper operation of all options. However, it should be verified that the measured interval conforms to the option specified on the service order.

Note: If the associated DAS 828A or 829-type is in the facility loopback mode, the CB lead is held ***off*** and the interval cannot be measured. If the data set is provided with option ZN (continuous carrier in), do not perform this test.

(1) Disconnect the CPE and connect the 914-type DTS to the data set.

(2) Insert red pins in the matrix as shown in Fig. 7.

(3) Set switches on the 914-type DTS as shown in Fig. 7 ***except move the COUNTER switch to INT X1 and TEST SET MODE switch to INTERVAL (914C DTS).***

(4) Verify that the locking AL button on the data set is depressed.

(5) Verify that switch S1 is OFF. Reset the counter.

(6) Move switch S1 to ON, and the clear-to-send response time appears on the counter.

Requirement: Option M—6- to 12-ms
Requirement: Option K—22- to 40-ms
Requirement: Option J—52- to 70-ms
Requirement: Option G—140- to 200-ms

Note: To measure the interval for option G, move the interval switch to X10. The counter indicates 14 to 20.

(7) To remeasure the clear-to-send response time, move switch S1 to OFF, reset the counter, and move switch S1 to ON.

(8) If the received line signal detector response time is to be measured, proceed to 5.11. Otherwise, restore the equipment to pretest condition.

5.11 ***Received Line Signal Detector Response Test:*** In this test, the response time of the received line signal detector circuit is measured. ***The data set must be provided with option ZO (continuous carrier OUT) for this test. If option ZO is installed, it must be removed at the end of the test.*** Although requirements are given for two possible options, the data set under test need not be checked for proper operation of both options. However, it should be verified that the measured interval conforms to the option specified on the service order. The test is performed as follows:

(1) Disconnect the CPE and connect the 914-type DTS to the data set.

(2) Insert red pins in the matrix as shown in Fig. 7 ***except move the pin in TP2-5 to TP2-8.***

(3) Set switches on the 914-type DTS as shown in Fig. 7 ***except move the COUNTER switch to INT X1 and TEST SET MODE switch to INTERVAL (914C DTS).***

(4) Apply power to the data set and 914-type DTS.

(5) Verify that the locking AL button on the data set is depressed.

(6) Verify that switch S1 is OFF.

(7) Reset the counter. Move switch S1 to ON and the received line signal detector response time will appear on the counter.

Requirement: Option Q—5- to 9-ms
Requirement: Option N—18- to 24-ms.

(8) To remeasure the response time, move S1 to OFF, reset the counter, and move S1 to ON.

(9) End of analog loopback test. Unless further testing is to be done, disconnect the test equipment from the data set and restore the equipment to pretest condition.

F. End-to-End Test

5.12 The procedure for performing an end-to-end test using the 914-type DTS is essentially the same for testing either 2-wire or 4-wire data sets. The following procedure is for 2-wire (half-duplex) testing. If 4-wire (duplex) testing is possible, the transmitting and receiving end-to-end tests will be performed simultaneously by ensuring that switch S1 (request-to-send) is ON at both ends.

Note: One end may be in a test center.

5.13 It will be necessary to establish voice communication during the test. The test is performed as follows:

(1) Establish test connections and set switches at both ends as shown in Fig. 8 ***except for the BIT RATE switch which must be set at the bit rate used by the CPE.***

(2) If testing 2-wire (half-duplex), set switch S1 to ON at the transmitting end and switch S1 to OFF at the receiving end. If testing 4-wire (duplex), set switch S1 to ON at both ends.

(3) Apply power to the data set and test equipment.

(4) Depress and release the START button on the 903-type DTS (if used).

Note: Steps (5) through (9) are for the receiving end only.

(5) On the 914-type DTS, set the FUNCTION switch to PHASE ADJ.

(6) Adjust the PHASE control to zero the meter.

(7) Move the FUNCTION switch to OFF.

(8) Operate the WORD SYNC switch to MAN and release when the counter stops.

(9) Press the RESET button to clear the counter.

(10) Conduct ten 1-minute error runs. Record the errors and reset the counter at the end of each 1-minute interval.

(11) Disregard the 1-minute interval with the most errors.

Requirement: Total errors for the remaining nine runs are shown in Table A.

(12) This completes the end-to-end test. Record the results. If the data distortion test is to be performed, proceed to paragraph 5.14. Otherwise, disconnect test equipment and restore the data station to pretest condition.

G. Data Distortion Test

5.14 At time of installation, whenever the data set will be used at a bit rate above 1200 bits per second (bps), perform this test and the end-to-end test (paragraphs 5.12 and 5.13). For all other conditions, perform this test whenever an end-to-end test is performed.

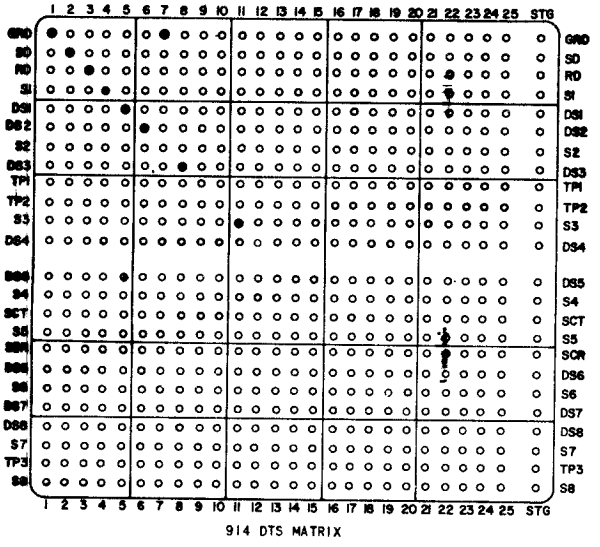
5.15 When performing these tests for data sets with delay equalizer options ZU and ZV (DS 202T-L1 series 6 and higher and DS 202T-L1A), do them for each option. Ensure option ZW (maximum compromise amplitude equalization) is installed in DS 202T-L1A. When performing these tests for data sets without the equalizer options (DS 202T-L1 series 5 and earlier), verify whether the requirements are met. If the requirements are not met, replace the data set with a series 6 set and repeat the tests.

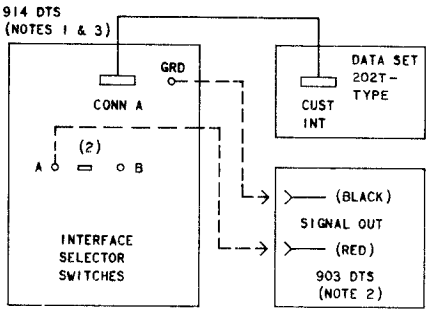
5.16 Perform the test as follows: Set up the equipment as described for an end-to-end test with the following exceptions.

- Set sample width switch to 50% position.
- Set bit rate switches to 1800 if channels meeting C2 conditioning requirements are used.

or

- Set bit rate switches to 1200 if unconditioned channels are used.





NOTES:

1. SET SWITCHES ON THE 914 DTS AS FOLLOWS:

SWITCH	SETTING
INTERFACE MODE	VOLTAGE
TEST SET MODE	SER (914C DTS) RCV SER (914B DTS)
COUNTER	BIT ERRORS
RCV BIT RATE	1800
RCV WORD LENGTH	63
TRANSMIT BIT RATE (914C)	1800
TRANSMIT WORD LENGTH (914C)	63
SAMPLE WIDTH	30%
SIG LEV	±4V
SWITCH S1, S3	OFF
INTERFACE SELECTOR SWITCHES	ALL SWITCHES MUST BE PUSHED IN EXCEPT 2A WHEN 903 DTS USED

2. SET SWITCHES ON 903 DTS AS FOLLOWS:

SWITCH	SETTING
BIT RATE	1800
TRIGGER	(+) POSITIVE
RANDOM-DOT	RANDOM

3. 914 DTS INDICATOR LAMPS AND SWITCHES CORRESPOND TO INTERFACE LEADS AS FOLLOWS:

SWITCH	LAMP	INTERFACE LEAD
S1		REQUEST TO SEND
	DS1	CLEAR TO SEND
	DS2	DATA SET READY
	DS3	RECEIVED LINE SIGNAL DETECTOR
S3		SECONDARY REQUEST TO SEND

Fig. 8—Equipment Setup for End-to-End Test

5.17 Conduct two 1-minute tests. Record the error count of the run with the fewest errors; disregard the other count.

Requirement: 20 or less errors at 1800 bps rate; 10 or less errors at 1200 bps rate.

5.18 If the data set under test is a DS 202T-L1 series 6 or higher or DS 202T-L1A install the option (ZU or ZV) which gives the best performance even if the requirements are met for both options.

5.19 If the data set under test is a DS 202T-L1A operating over unconditioned 3002 telephone facility at 1100 to 1400 bps repeat the data distortion test with option ZX (minimum compromise amplitude equalization) installed. Upon completion of the test install the option (ZX or ZW) which gives the

TABLE A

MAXIMUM ERRORS ALLOWED
(PRIVATE LINE USING 914-TYPE DTS)

BPS	MAXIMUM NUMBER
1000	4
1200	5
1400	6
1600	7
1800	8

best performance. If no errors result with either option used, install option ZW.

H. Reverse Channel Test

5.20 This test checks the interface circuits used with the reverse channel. It will be necessary to use a test center for this test. The test center must be capable of transmitting a tone (387 Hz) to the data set and measuring the frequency of the tone received from the data set. The test is performed as follows:

(1) Disconnect the CPE and connect the 914-type DTS to the data set.

(2) Insert red pins in the matrix as shown in Fig. 7.

(3) Set switches on the 914-type DTS as shown on the tables associated with Fig. 7 except move switch S1 to ON.

(4) Apply power to the data set and to the 914-type DTS.

(5) Request the test center to send 387 Hz at -12 dBm at the 0 TLP.

Requirement: DS4 lamp lights (SCF ***on***).

(6) On the 914-type DTS, move switch S3 to ON and S1 to OFF. This transmits 387 Hz to the test center.

(7) Request the test center to measure the frequency of the reverse channel tone.

Requirement: 387 (±10) Hz.

(8) Upon completion of the test, disconnect the 914-type DTS and restore the data set to pretest condition.

I. Ground Noise Test

5.21 If the data set and CPE are not connected to the same ground, errors may be caused by a potential difference between data set ground and CPE ground. To detect the presence of noise potentials, a test should be made using the 6-type impulse counter. This counter is used to count the number of impulse noise peaks during a measured time period. The counter registers only the peaks which exceed a preset level and which are separated by approximately 150-ms or more.

5.22 Test equipment required for this test is as follows:

1—6H impulse counter (or equivalent)

1—914-type DTS

1—2W6A test cord for 6H impulse counter (310 plug on one end, alligator clips connected to tip and ring on the other end).

Note: For information pertaining to the 6H impulse counter, refer to the section entitled 6H and 6HR Impulse Counters (J94006H and J94006HR)—Description, Operation, and Maintenance (103-620-101). If the 6H impulse counter is not available, a 6A impulse counter may be used. For information pertaining to the 6A impulse counter, refer to the section entitled J94006A (6A) Impulse Counter—Description, Operation, and Maintenance (103-620-100).

5.23 In this test, the impulse counter is connected between the grounds of the data set and the CPE. The counter registers when potential differences of sufficient amplitude have developed between the separated grounds. The 914-type DTS is used to gain access to the ground interface leads. If a 914-type DTS is not available, any suitable method of access (such as 901 test adapter) may be used.

5.24 The 6H impulse counter is connected and the test is performed as follows.

(1) Connect the 914-type DTS connector A to the customer connector on the data set. Connect the 914-type DTS connector B to the data set connector on the CPE. This test assumes that protective ground from the CPE appears at the customer interface.

(2) On the 914-type DTS, remove all programming pins from the matrix. Pull up all A and B interface selector switches.

(3) Connect one clip of the 2W6A cord to switch 1B and the other clip to any clear, bare metal on the data set housing. Verify that power is applied to data set and CPE.

(4) Insert the 310 plug into the 310 MEAS jack on the 6H impulse counter.

(5) On the 6H impulse counter, set the DIAL-MEAS switch to MEAS and set the DBRN dial to 90.

(6) Reset the counter on the 6H impulse counter to 0.

(7) Set the minutes control to 15. After the 15-minute test has elapsed, record the number of indications on the counter.

(8) Remove clips of 2W6A cord and connect to 7A and 7B.

(9) Reset the counter on the 6H impulse counter to 0.

(10) Set the minutes control to 15. After the 15-minute test has elapsed, record the number of indications on the counter.

5.25 At the end of both the 15-minute periods, there should be no indications on the counter of the 6H impulse counter. If there is an indication on the counter, the grounds must be bonded together according to local instructions. At the end of the test, disconnect the test equipment and restore the data set to pretest condition.

6. REFERENCES

6.01 The following Bell System Practices provide additional information concerning DS 202T-type and data stations using DS 202T-type.

SECTION	TITLE
590-002-114	Data Set 202T—Reference Guide
590-102-130	39A1 Data Mounting—Identification
590-102-131	40-Type Data Mounting—Identification
590-102-137	47-Type Data Mounting—Identification
592-031-100	Data Set 202T-Type Transmitter-Receiver—Description and Operation
592-031-180	Data Set 202T Transmitter-Receiver—SummarizingSpecification
592-031-200	Data Set 202T-Type Transmitter-Receiver—Installation and Connections
592-861-100	Data Station Using Data Set 202T—Description and Operation
592-861-200	Data Station Using Data Set 202T—Installation and Connection
666-511-502	Test of Data Services Provided by Data Set 202T From a Private Line Test Room

6.02 Detailed information concerning DS 202T is also contained in CD- and SD-1D243-01.