EADAS TRAFFIC DATA CONVERTER (ETDC) SD-3B213-01
CONNECTION VERIFICATION TESTS
USING EADAS TEST SET SD-3B220-01
ENGINEERING AND ADMINISTRATIVE DATA ACQUISITION SYSTEM (EADAS)

1. GENERAL

1.01 This section describes a method of performing connection verification tests of the input leads to the EADAS Traffic Data Converter (ETDC) SD-3B213-01.

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. Equipment Test Lists are affected.

(1) Add information on high resolution 10-second usage card

(2) Add Tests G, H, and I

(3) Change BSP reference numbers.

1.03 The tests covered are:

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A. Off-Line Connection Verification: This test checks the continuity of the input leads to the ETDC from the equipment associated with the ETDC inputs. It also checks for crosses between other ETDC inputs. The ETDC is placed in the test mode while performing this test. 4

B. On-Line Connection Verification —From Associated Equipment: This test checks the continuity of the input leads to the ETDC from the equipment associated with the ETDC inputs while in its normal operating mode. Crosses between ETDC inputs cannot be detected by this test. 6

C. On-Line Input Verification —From ETDC: This test checks the ability of the ETDC to convert a pulsed input lead at the ETDC into a unique binary address. The ETDC remains in its normal operating mode during this test. Crosses between ETDC inputs cannot be detected by this test. . 8

D. Off-Line Connection Verification Using EADAS Test Set and ETDC Input Pulser: This test checks the continuity of the input leads to the ETDC from the equipment associated with the ETDC inputs. It also checks for crosses between other ETDC inputs. The ETDC is placed in the test mode while performing this test. 9

E. On-Line Connection Verification —From Associated Equipment Using EADAS Test Set and ETDC Input Pulser: This test checks the continuity of the input leads to the ETDC from the equipment associated with the ETDC inputs while the ETDC is in its normal operating mode. Crosses between ETDC inputs cannot be detected by this test. 11

F. On-Line Input Verification —From ETDC Using EADAS Test Set and ETDC Input Pulser: This test checks the ability of the ETDC to convert a pulsed input lead at the ETDC into a unique binary address. The ETDC remains in its normal operating mode during this test. Crosses between

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ETDC inputs cannot be detected by this test. 13

G. ***Quick Test of 4A TUR (ICUR) to ETDC Interface:*** This test checks that the proper number of ICUR words and busy detectors are transmitted from the ETDC. 15

H. ***4A TUR (ICUR) to ETDC Interface:*** This test checks that the proper address is encoded by the ETDC for each TUR crosspoint and that the proper number of ICUR words are generated by the ETDC for each TUR when TUR to ETDC interface problems are suspected. Also, this test provides steps to check from equipment location, via TUR, to output of ETDC when problems with an individual scan point are suspected. 19

I. ***EADAS Test Set Operation Test:*** This test checks the operating features of the EADAS test set. . 25

1.04 All tests must be coordinated with traffic personnel at the EADAS central unit (CU).

1.05 Test G is an off-line procedure which is shorter and less extensive than Test H. This test should be performed to provide a quick check of the proper working condition of the 4A TUR to ETDC interface. Consequently, the test should only be performed when the loss of data can be tolerated.

1.06 Test H is an off-line procedure and requires the removal of all non-ICUR ETDC input cards. Consequently, the test should only be performed when the loss of data can be tolerated.

1.07 Tests A, B, D, and E require the aid of an assistant.

1.08 The Local Frame Line Circuit SD-96379-01, or Switchmans Talking Line Circuit SD-32021-01 (step-by-step offices) is used when performing tests that are outlined in this section. The EADAS test set is connected to the talking line circuit at the equipment location associated with the particular ETDC input lead(s) to be tested. At the ETDC, the output of the ETDC is also connected to the talking line circuit. Figure 1 shows a typical testing arrangement.

1.09 Local instructions should be followed for recording and reporting any traffic register operations caused by performing this test.

Caution: Before the tests in this section are performed, it is important that consideration be given to the data which is blocked while the ETDC inputs are being tested. The data for the entire 30-minute data collection interval at the EADAS central unit is considered lost because of the interruption of normal data.

1.10 Refer to Section 190-510-212 for method of performing local tests of the ETDC.

1.11 Refer to Section 190-510-211 for method of performing remote tests of the ETDC from the EADAS central unit.

1.12 Refer to Section 190-510-213 for trouble locating procedures in the ETDC.

1.13 The ETDC is arranged to accommodate 32 input cards, each of which have 32 input leads giving a maximum capacity of 1024 inputs. Input card No. 31 is dedicated to handle discrete events; therefore only 989 inputs can be used for data collection and calculations (addresses 0 and 1 are dedicated for buffer overflow and parity errors, and an additional input is reserved for ETDC cycle count). Table A shows the input cards (circuit packs) which are associated with the ETDC input leads. There are basically six different types of input cards.

(1) ***Peg Count Card***—Causes a unique binary data word (address) to be generated once, and only once, for each time one of its input leads receives a peg count indication.

(2) ***Scaled Peg Count Card***—Causes a unique address to be generated once for each time one of its input leads receive 10 peg count indications.

(3) ***Usage Card***—Causes a unique address to be generated for each time one of its input leads is scanned (100 seconds) and found busy.

(4) ***Discrete Card***—Causes a unique address to be generated for each time one of its input leads is scanned (10 seconds) and found busy.

(5) ***Multiscan Usage Card***—Causes a unique address to be generated for each time one of its input leads is scanned (1.8 seconds) and found busy. (Option YF permits an input lead to be scanned every 1.0 second and option YG permits an input lead to be scanned every 3.6 seconds.)

(6) ***High Resolution 10-Second Usage Card***—Provides highly accurate sampling for short holding time circuits on an individual basis. It contains circuitry for scanning at a 20 ms rate for 32 inputs. When an individual input reaches a total of 500 in storage (equivalent to 10 seconds), an output is provided to the ETDC encoder.

TABLE A

INPUT NO. S	INPUT CARD NO.	INPUT NO. S	INPUT CARD NO.
0-31	0	512-543	16
32-63	1	544-575	17
64-95	2	576-607	18
96-127	3	608-639	19
128-159	4	640-671	20
160-191	5	672-703	21
192-223	6	704-735	22
224-255	7	736-767	23
256-287	8	768-799	24
288-319	9	800-831	25
320-351	10	832-863	26
352-383	11	864-895	27
384-415	12	896-927	28
416-447	13	928-959	29
448-479	14	960-991	30
480-511	15	992-1023	31

1.14 Each input lead to the ETDC directly corresponds to a register number and is listed in Table B. Associated with each input lead number is an ETDC terminal location and a corresponding 10-bit word unique to the associated input. Counting from left to right, bits 3 through 7 represent the input card number (block) and bits 8 through 12 represent one of 32 input leads.

1.15 The EADAS test set generates the pulses on the input lead to be verified and also displays the binary address (word) associated with the input (Table B). The format of an EADAS word is shown on the faceplate of the EADAS test set.

1.16 The ETDC input pulser is used to assist in the verification of inputs to the ETDC. The ETDC input pulser is a portable, compact, self-testing unit that provides a selection of positive dc pulses or ground closures for the stimulation of inputs.

1.17 When an input to the ETDC is being verified, the IPVF key on the EADAS test set is operated which pulses the input lead ten times. For each time the input lead is pulsed, it is received at the ETDC and converted into an address which is unique to the associated input. The binary word address is then transmitted over the talk line circuit to the EADAS test set. For each time the IPVF key is operated, 10 addresses will be generated by the ETDC and received at the EADAS test set. The first address which is transmitted will appear on the rightmost 15 RECEIVER lamps, and the second address will appear on the leftmost 15 RECEIVER lamps. Table B lists the addresses which are associated with the input leads. The RECEIVER lamps corresponding to address bits with a "one" will be lighted. The MATCH NO. counter registers 10 counts for each time the IPVF key is operated.

1.18 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 3 or 4 of this section indicates an action which may or may not be required, depending on local conditions. The conditions under which a lettered step or series of lettered steps should be made are given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

2. APPARATUS

2.01 EADAS test set SD-3B220-01, equipped with the following:

(a) TDC interface module, ED-3B061

(b) P2AA cord, 6 feet long, equipped with two 241A plugs (2P13B cord)

(c) Two conductor patch cords equipped with one 241-type plug, one MINI-GATOR* clip with insulator on tip lead and one MINI-GATOR clip with insulator on sleeve lead.

*Registered trademark of Mueller Electric Company.

2.02 If Tests D, E, F, and ▶G◀ are to be performed, provide an ETDC input pulser SD-3B221-01, equipped with testing cords.

2.03 ▶If Test H is to be performed, provide the following:

(a) 32A test set

(b) 748A circuit pack puller

(c) 768A blocking tools.

2.04 If Test I is to be performed, provide a P2AA cord, 3 feet long, equipped with two 241A plugs (2P13A cord).◀

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests Except Test I		
1	At ETDC— Verify that ETDC is in normal mode (NOR and PWR ON switches operated).	
2	Consult office records (E8109 questionnaire) to obtain input card assignments of ETDC.	
3	Verify that ETDC is properly equipped with input cards.	
4a	If the operating features of the EADAS test set are to be tested— Perform Test I.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Off-Line Connection Verification		
5	At ETDC— Using appropriate cord, connect data set output to TALK LINE or SWITCHMANS TALK CIRCUIT (Fig. 1 and Table C).	
6	Consult office records to obtain equipment location associated with ETDC input leads to be verified.	

STEP	ACTION	VERIFICATION
7	At equipment location— Using 2P13B cord, connect the CO TALK jack of EADAS test set to TALK LINE or SWITCHMANS TALK CIRCUIT (Fig. 1).	
8	Connect EADAS test set IPVF GRD jack to frame ground.	
9	Connect EADAS test set to 115-volt ac power outlet.	
10	At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
11	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
12	Set IPVF 10/CONT switch to 10.	
13	Set common control BIN/ASCII switch to BIN.	
14	Set TDRS/EADAS switch on TRANSMITTER to EADAS.	
15b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
16c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
17	Set switches associated with 202T data set as shown in Fig. 2.	
18	At ETDC— Operate VT TST/NOR switch to TST.	Lamp on AR643 circuit pack lighted.
19	At EADAS test set— Depress the LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
20	At EADAS test set— Set RECEIVER switches from left to right as follows: down, center, center, center, center, center, center, center, center, center, center, center, down, up, up.	
21	Depress the RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.

STEP	ACTION	VERIFICATION
22	Using input verifier test cord, connect IPVF positive pulse (red jack) of the EADAS test set to terminal of equipment associated with ETDC lead to be verified. Consult office records for terminal assignments.	
23	At EADAS test set— Momentarily depress IPVF START pushbutton.	See flowchart (Fig. 3) for verification and further action.
24	Repeat Steps 21 through 23 for other inputs to be verified.	
25	At ETDC— Remove all cords, restore all switches and keys to normal.	
26	At equipment location associated with input leads being verified— Remove cord connection.	
27	Remove EADAS test set connection from TALK LINE or SWITCHMANS TALK CIRCUIT.	
B. On-Line Connection Verification—From Associated Equipment		
5	At ETDC— Using appropriate cord, connect data set output to TALK LINE or SWITCHMANS TALK CIRCUIT (Fig. 1 and Table C).	
6	Consult office records to obtain equipment location associated with ETDC input leads to be verified.	
7	At equipment location— Using 2P13B cord, connect the CO TALK jack of EADAS test set to TALK LINE or SWITCHMANS TALK CIRCUIT (Fig. 1).	
8	Connect EADAS test set IPVF GRD jack to frame ground.	
9	Connect EADAS test set to 115-volt ac power outlet.	
10	At EADAS test set— Operate PWR switch to ON.	
11	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position.	

STEP	ACTION	VERIFICATION
	MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF.	
12	Set IPVF 10/CONT switch to 10.	
13	Set common control BIN/ASCII switch to BIN.	
14	Set TDRS/EADAS switch of TRANSMITTER to EADAS.	
15b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
16c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
17	Set switches associated with 202T data set as shown in Fig. 2.	
18	Refer to Table B to obtain address associated with input lead to be verified.	
19	At EADAS test set— Set RECEIVER switches left to right to agree with address obtained in Step 18.	
20	Momentarily depress RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.
21	Using the input verifier test cord, connect IPVF negative pulse (blue jack) of EADAS test set to terminal associated with input being verified.	
Nonscaled Inputs		
22	At EADAS test set— Momentarily depress IPVF START pushbutton.	MATCH NO. indicates approximately 10.
23	Repeat Steps 18 through 22 for other nonscaled inputs to be verified.	
	Note: It may be necessary to move EADAS test set to other equipment location. If necessary, remove cord connection from EADAS test set and TALK LINE or SWITCHMANS TALK CIRCUIT and reconnect at other equipment location.	

STEP	ACTION	VERIFICATION
Scaled Inputs		
24	At EADAS test set— Momentarily depress IPVF START pushbutton.	MATCH NO. indicates at least 1 count.
25	Repeat Steps 18 through 21 and 24 for other scaled input leads to be tested. (See note after Step 23).	
26	At ETDC— Remove cord connection.	
27	At equipment location associated with input leads being verified— Remove all cords.	
28	Remove EADAS test set connection to TALK LINE or SWITCHMANS TALK CIRCUIT.	

C. On-Line Input Verification—From ETDC

5	Insert TDC INTERFACE MODULE ED-3B061 into TST connector.	
6	Set TDC INTERFACE MODULE switch according to Table D.	
7	Insert SCC connector into TDC INTERFACE MODULE.	
8	Connect EADAS test set IPVF GRD jack to frame ground.	
9	Connect EADAS test set to 115-volt ac power outlet.	
10	At EADAS test set— Operate PWR switch to ON.	
11	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF.	
12	Set IPVF 10/CONT switch to 10.	
13	Set RECEIVER CONT/ONCE switch to CONT.	
14	Set common control BIN/ASCII switch to BIN.	

STEP	ACTION	VERIFICATION
15	Set TDRS/EADAS switch on TRANSMITTER to EADAS.	
16b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
17c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
18	Set switches associated with 202T data set as shown in Fig. 4.	
19	Refer to Table B to obtain binary address associated with input lead to be verified.	
20	Set RECEIVER switches on EADAS test set to agree with address obtained in Step 19.	
21	Momentarily depress RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.
22	Using input verifier test cord, connect IPVF negative pulse (blue jack) of EADAS test set to terminal associated with input being verified (Table B).	
Nonscaled Inputs		
23	At EADAS test set— Momentarily depress IPVF START pushbutton.	RECEIVER MATCH NO. indicates approximately 10.
24	Repeat Steps 19 through 23 for other nonscaled inputs to be verified.	
Scaled Inputs		
25	At EADAS test set— Momentarily depress IPVF START pushbutton.	RECEIVER MATCH NO. indicates at least 1.
26	Repeat Steps 19 through 22 and 25 for other scaled input leads to be tested.	
27	Remove all cords and TDC INTERFACE MODULE, restore all keys on EADAS test set to normal.	
D. Off-Line Connection Verification Using EADAS Test Set and ETDC Input Pulser		
5	At ETDC— Connect headset to TEL jack of frame line talk circuit.	

STEP	ACTION	VERIFICATION
	Note: It may be necessary to operate frame line key(s) to connect one floor to another floor.	
6	Consult office records to obtain equipment location associated with input lead(s) to be verified.	
7	At equipment location associated with input lead(s) to be verified— Connect headset to TEL jack of frame line talk circuit. (See note after Step 5.)	
8	At ETDC— Insert TDC INTERFACE MODULE into TST CONN.	
9	Set TDC INTERFACE MODULE switch to proper position (Table D).	
10	Insert SCC CONN of EADAS test set into TDC INTERFACE MODULE.	
11	Connect EADAS test set to 115-volt ac power outlet.	
12	At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
13	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
14	Set common control BIN/ASCII switch to BIN.	
15	Set TDRS/EADAS switch on TRANSMITTER to EADAS.	
16b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
17c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
18	Set switches associated with 202T data set as shown in Fig. 4.	
19	At ETDC— Operate VT TST/NOR switch to TST.	Lamp on AR643 circuit pack lighted.

STEP	ACTION	VERIFICATION
20	At EADAS test set— Depress the LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
21	Refer to Table B to obtain address associated with input lead to be verified.	
22	At EADAS test set— Set RECEIVER switches from left to right to agree with address obtained in Step 21.	
23	Momentarily depress the RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.
24	At ETDC input pulser— For operation and connection to input to be verified, refer to Section ▶190-510-214.◀	See flowchart (Fig. 3) for verification and further action.
25	Repeat Steps 23 and 24 for other inputs to be verified.	
26	At ETDC— Remove all cords and TDC INTERFACE MODULE, restore all switches and keys to normal.	
27	At equipment location associated with input leads being verified— Remove all cords.	

E. On-Line Connection Verification—From Associated Equipment Using EADAS Test Set and ETDC Input Pulser

5	At ETDC— Connect headset to TEL jack of frame line talk circuit. ***Note:*** It may be necessary to operate frame line key(s) to connect one floor to another floor.	
6	Consult office records to obtain equipment location associated with input lead(s) to be verified.	
7	At equipment location associated with input lead(s) to be verified— Connect headset to TEL jack of frame line talk circuit. (See note after Step 5.)	

STEP	ACTION	VERIFICATION
8	At ETDC— Insert TDC INTERFACE MODULE into TST CONN.	
9	Set TDC INTERFACE MODULE switch to proper position (Table D).	
10	Insert SCC CONN of EADAS test set into TDC INTERFACE MODULE.	
11	Connect EADAS test set to 115-volt ac power outlet.	
12	At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
13	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
14	Set common control BIN/ASCII switch to BIN.	
15	Set TDRS/EADAS switch on TRANSMITTER to EADAS.	
16b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
17c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
18	Set switches associated with 202T data set as shown in Fig. 4.	
19	Refer to Table B to obtain address associated with input lead to be verified.	
20	At EADAS test set— Set RECEIVER switches from left to right to agree with address obtained in Step 19.	
21	Momentarily depress the LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
22	Momentarily depress the RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.

STEP	ACTION	VERIFICATION
23	At ETDC input pulser— For operation and connection to input to be verified, refer to Section ▶190-510-214.◀	
Nonscaled Inputs		
24	At ETDC input pulser— Operate CLR/START switch to START.	At EADAS test set— MATCH NO. indicates 10.
25	Operate CLR/START switch to CLR.	
26	Repeat Steps 19 through 25 for other nonscaled inputs to be verified.	
Scaled Inputs		
27	At ETDC input pulser— Operate CLR/START switch to START.	At EADAS test set— MATCH NO. indicates 1.
28	Operate CLR/START switch to CLR.	
29	Repeat Steps 19 through 23, 27, and 28 for other scaled inputs to be verified.	
30	At ETDC— Remove all cords and INTERFACE MODULE.	
31	At equipment location associated with input leads being verified— Remove all cords.	
F. On-Line Input Verification—From ETDC Using EADAS Test Set and ETDC Input Pulser		
5	At ETDC— Insert TDC INTERFACE MODULE into TST CONN.	
6	Set TDC INTERFACE MODULE switch to proper position (Table D).	
7	Insert SCC CONN of EADAS test set into TDC INTERFACE MODULE.	
8	Connect EADAS test set to 115-volt ac power outlet.	
9	At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
10	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to	

STEP	ACTION	VERIFICATION
	up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
11	Set common control BIN/ASCII switch to BIN.	
12	Set TDRS/EADAS switch of TRANSMITTER to EADAS.	
13b	If testing home ETDC— Set BAUD switch of TRANSMITTER to 1200.	
14c	If testing remote ETDC— Set BAUD switch of TRANSMITTER to 600.	
15	Set switches associated with 202T data set as shown in Fig. 4.	
16	Refer to Table B to obtain binary address associated with input lead to be verified.	
17	At EADAS test set— Set RECEIVER switches from left to right to agree with address obtained in Step 16.	
18	Momentarily depress the LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
19	Momentarily operate the RECEIVER CLEAR key.	MATCH NO. resets to 00.
20	At ETDC input pulser— For operation and connection to input to be verified, refer to Section ▶190-510-214.◀	
Nonscaled Inputs		
21	At ETDC input pulser— Operate CLR/START switch to START.	At EADAS test set— MATCH NO. indicates 10.
22	Operate CLR/START switch to CLR.	
23	Repeat Steps 16 through 22 for other nonscaled inputs to be verified.	
Scaled Inputs		
24	At ETDC input pulser— Operate CLR/START switch to START.	At EADAS test set— MATCH NO. indicates 1.
25	Operate CLR/START switch to CLR.	

STEP	ACTION	VERIFICATION
26	Repeat Steps 16 through 20, 24, and 25 for other scaled inputs to be verified.	
27	At ETDC— Remove all cords and INTERFACE MODULE.	
28	At equipment location associated with input leads being verified— Remove all cords.	
G. ▶Quick Test of 4A TUR (ICUR) to ETDC Interface		
5	At ETDC— Set A0 through A3 switches to 0-0-0-0, respectively.	
6	Operate LT1 switch to LCL.	
7	Operate LT2 switch to LCL.	
8	Set A0 through A3 switches to 0-0-0-1, respectively. (Restore command.)	
9	Momentarily operate TST switch to TST.	
10	Set A0 through A3 switches to 1-0-1-0, respectively. (Clear usage command.)	
11	Momentarily operate TST switch to TST.	
12	Wait 100 seconds— Set A0 through A3 switches to 1-1-0-0, respectively. (TUR Detector Test command.)	
13	Momentarily operate TST switch to TST.	
14	Set A0 through A3 switches to 1-0-0-0, respectively. (TUR on command.)	
15	Momentarily operate TST switch to TST.	
16	Insert EADAS test set TDC INTERFACE MODULE into TST CONN.	
17	Set TDC INTERFACE MODULE switch to proper position (Table D).	
18	Insert SCC CONN of EADAS test set into TDC INTERFACE MODULE.	
19	Connect EADAS test set to 115-volt ac power outlet.◀	

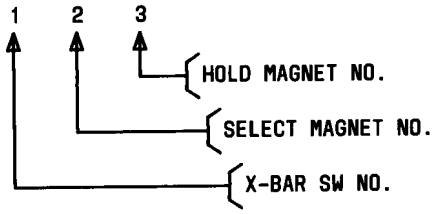
STEP	ACTION	VERIFICATION
20	▶At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
21	Set IPVC 10/CONT switch to 10.	
22	Set common control BIN/ASCII switch to BIN.	
23	Set TRANSMITTER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. TDRS/EADAS switch to EADAS. BAUD switch to 1200.	
24	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
25	Set switches associated with 202T data set as shown in Fig. 4.	
26	Depress the LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished. Peg count will still come through.
Total ICUR Word Count		
27	Set RECEIVER switches from left to right as follows: down, center, center, center, center, center, center, center, center, center, center, center, up, up, up.	
28	Depress the RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.
29	At ETDC— Set A0 through A3 switches to 0-1-0-0, respectively. (Scan command.)	
30	Momentarily operate TST switch to TST. Warm-up cycle begins on TUR.	
31	After 100 seconds— Momentarily operate TST key to TST and begin timing.	At EADAS test set— RECEIVER LEDs flicker as TURs scan. ***Note:*** RECEIVER MATCH NO. display should advance while TURs are scanning.
32	At EADAS test set— After 200 seconds—	Total in RECEIVER MATCH NO. counter should be same as Table E.◀

STEP	ACTION	VERIFICATION
	▸Compare RECEIVER MATCH NO. counter with Table E.	***Note:*** If total in RECEIVER MATCH NO. counter is not the same as Table E, each TUR should be tested to determine which TUR(s) is causing trouble per Steps 33b through 40b. If total agrees with Table E proceed to Step 41.
33b	If total in RECEIVER MATCH NO. counter does not match Table E— Select one of TURs to be tested.	
34b	At other TURs not to be tested— Block SC relay(s) not operated.	
35b	Repeat Steps 29 through 32.	
36b	At EADAS test set— After 200 seconds— Compare RECEIVER MATCH NO. counter with Table E.	Total in RECEIVER MATCH NO. counter should be same as Table E. If total does not agree with Table E, proceed to Step 38b.
37b	Select another TUR to be tested and repeat Steps 34b through 36b until RECEIVER MATCH NO. does not agree with Table E.	
38b	TUR being tested has a trouble condition. Clear trouble.	
39b	Remove all SC relay blocking tools from TURs.	
40b	Repeat Steps 29 through 32.	
Busy Detector Word Count		
41	At EADAS test set— Set RECEIVER switches per Table F for TUR under test.	
42	Momentarily depress LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
43	Momentarily depress the RECEIVER CLEAR pushbutton.	MATCH NO. resets to 00.
44	At ETDC— Set A0 through A3 switches to 0-1-0-0, respectively. (Scan command.)	
45	Momentarily operate TST switch to TST and begin timing.	After 200 seconds— At EADAS test set— RECEIVER MATCH NO. display indicates 00.◂

STEP	ACTION	VERIFICATION
		♦*Note:* RECEIVER MATCH NO. display should advance while TURs are scanning and receiver LEDs should flicker.
46c	If RECEIVER MATCH NO. does not display 00— At EADAS test set— Momentarily depress RECEIVER CLEAR pushbutton.	
47c	Select one of the TURs to be tested.	
48c	At other TURs not to be tested— Block SC relay(s) not operated.	
49c	Repeat Steps 41 through 48c using Table F settings until TUR in trouble can be determined.	
50c	When TUR with trouble condition has been determined— At TUR— Replace GA, GB, and/or PLC relays.	
51c	Repeat Steps 41 through 45. ***Note:*** If trouble condition is not cleared, refer to Test L in BSP 252-122-503, No. 4A TRAFFIC USAGE RECORDER, SD-95738-01, PERFORMANCE TEST.	
52c	Remove all SC relay(s) blocking tools.	
53	At EADAS test set— Set PWR switch to OFF.	
54	At ETDC— Remove all cords and INTERFACE MODULE.	
55	Set A0 through A3 switches to 0-0-0-1, respectively. (Restore command.)	
56	Momentarily operate TST switch to TST.	
57	Set A0 through A3 switches to 1-0-1-0, respectively. (Clear usage command.)	
58	Momentarily operate TST switch to TST.	
59	Set A0 through A3 switches to 0-0-0-0, respectively.	
60	Operate LT2 switch to RMT.♦	

STEP	ACTION	VERIFICATION
61	▶Operate LT1 switch to RMT.	
H. 4A TUR (ICUR) to ETDC Interface		
5	At ETDC— Set PWR switch to OFF.	PWR INT lamp lighted. Audible alarm remains silent.
6	Using a 748A circuit pack puller— Remove all input circuit packs in row 06, position 00-31.	
7	Operate PWR switch to ON.	PWR INT lamp extinguished.
8	Set VT switch to NOR.	
9	Set A0 through A3 switches to 0-0-0-0, respectively.	
10	Operate LT1 switch to LCL.	
11	Operate LT2 switch to LCL.	
12	Set A0 through A3 switches to 0-0-0-1, respectively. (Restore command.)	
13	Momentarily operate TST switch to TST.	
14	Set A0 through A3 switches to 1-0-1-0 respectively. (Clear usage command.)	
15	Momentarily operate TST switch to TST.	
16	Set A0 through A3 switches to 1-1-0-0, respectively. (TUR Detector Test command.)	
17	Momentarily operate TST switch to TST.	
18	Set A0 through A3 switches to 1-0-0-0, respectively. (TUR on command.)	
19	Momentarily operate TST switch to TST.	
20	At ETDC— Using appropriate cord, connect data set output to TALK LINE or SWITCHMANS CIRCUIT (Fig. 1 and Table C).	
21	At TUR equipment— Using 2P13B cord, connect the CO TALK jack of EADAS test set to TALK LINE or SWITCHMANS TALK CIRCUIT (Fig. 1).◀	

STEP	ACTION	VERIFICATION
22	♦Connect EADAS test set IPVF GRD jack to frame ground.	
23	Connect EADAS test set to 115-volt ac power outlet.	
24	At EADAS test set— Operate PWR switch to ON.	+5, +15, and ±6V lamps lighted.
25	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
26	Set IPVF 10/CONT switch to 10.	
27	Set common control BIN/ASCII switch to BIN.	
28	Set TRANSMITTER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. TUR/EADAS switch to EADAS. BAUD switch to 1200.	
29	Set switches associated with 202T data set as shown in Fig. 2.	
30	Depress LOAD CLEAR pushbutton.	All RECEIVER lamps extinguished.
31	Set RECEIVER switches from left to right as follows: down, center, center, center, center, center, center, center, center, center, center, center, up, up, up.	
32	Depress RECEIVER CLEAR pushbutton.	RECEIVER MATCH NO. resets to 00.
33	At TURs— Verify that TURs are not scanning.	
34	At TUR under test— Operate and lock white button of 32A test set.	
35	Insert plug of 32A test set into TST jack.	TUR ON relay operates. Select magnets 0 on scan and register switches operate.
36	Step circuit (operation of red button) by means of 32A test set to close desired crosspoint	Hold magnets on scan and register switch operate to desired crosspoint.♦

STEP	ACTION	VERIFICATION
	◗(switch number, horizontal number, vertical number).	At EADAS test set— RECEIVER LEDs display crosspoint being tested.
	Note 1: Each crosspoint on the scan and register switches is assigned a 3-digit number derived as follows:  	
	Note 2: The TUR can be advanced step by step by operating the red button on the 32A test set, one operation per step.	
37	At EADAS test set— Verify data on RECEIVER LEDs is the required data for crosspoint being tested. (See Fig. 6.)	
38b	If data has to be regenerated— At EADAS test set— Momentarily operate TUR RR key.	RECEIVER LEDs display data for crosspoint being tested.
39c	If testing a trouble condition indicating an individual scan point— At equipment under test— Block circuit idle.	
	Note: See Section 252-122-501 for blocking TUR circuit idle.	
40c	At EADAS test set— Momentarily operate TUR RR key.	
41c	Verify that data on RECEIVER LEDs indicates associated detector is idle. (See Fig. 6.)	
	Note: On all ground idle circuits, the detector is operated when associated circuit under test is idle.	
42c	At equipment under test— Block circuit busy.	
	Note: See Section 252-122-501 for blocking TUR busy.	
43c	Verify that data on RECEIVER LEDS indicates associated detector is busy. (See Fig. 6.)◖	

STEP	ACTION	VERIFICATION
	◗ ***Note:*** On all ground idle circuits, the detector is nonoperated when the circuit is busy.	
44c	At equipment under test— Remove blocking tool.	
45c	Disconnect 32A test set from TST jack.	
46c	Proceed to Step 78g.	
47d	If another crosspoint is to be tested— Repeat Steps 36 and 37.	
48	When all crosspoints have been tested— Step circuit (operation of 32A test set red button) to crosspoint 599.	Proper select and hold magnets operate and release.
49	Operate red button once.	TUR frame does not advance to 000.
50	Remove and insert plug of 32A test set from TST jack.	
51	Operate red button once.	TUR frame advanced to 000.
52	Remove plug of 32A test set from TST jack.	
53e	If other TURs are to be tested— Repeat Steps 34 through 52.	
54	At EADAS test set— Momentarily depress RECEIVER CLEAR pushbutton.	
55	At ETDC— Set A0 through A3 switches to 0-0-0-0, respectively.	
56	Set A0 through A3 switches to 0-1-0-0, respectively. (TUR scan command.)	
57	Momentarily operate TST switch to TST.	
58	Wait 100 seconds— Momentarily operate TST key.	At EADAS test set— RECEIVER LEDs flicker as TURs scan.
59	At EADAS test set— After 200 seconds— Compare RECEIVER MATCH NO. counter with Table E.	Total in RECEIVER MATCH NO. counter should be same as Table E. ***Note:*** If total in RECEIVER MATCH NO. counter is not the same as Table E, each TUR should be tested to determine which TUR(s) is causing trouble per Steps 60f through ◖

STEP	ACTION	VERIFICATION
		67f. If total agrees with Table E, proceed to Step 68.
60f	♦ If total in RECEIVER MATCH NO. counter does not match Table E— Select one of TURs to be tested.	
61f	At other TURs not to be tested— Block SC relay(s) not operated.	
62f	Repeat Steps 56 through 58.	
63f	At EADAS test set— After 200 seconds— Compare RECEIVER MATCH NO. counter with Table E.	Total in RECEIVER MATCH NO. counter should be same as Table E. If total does not agree with Table E, proceed to Step 64f.
64f	Select another TUR to be tested and repeat Steps 61f through 63f until RECEIVER MATCH NO. does not agree with Table E.	
65f	TUR being tested has a trouble condition. Clear trouble.	
66f	Remove all SC relay blocking tools from TURs.	
67f	Repeat Steps 56 through 59.	
68	At EADAS test set— Set RECEIVER switches from left to right as follows: down, center, up, up, center, center, up, up, up, up, up, up, up, up, up.	
69	Depress RECEIVER CLEAR pushbutton.	
70	At ETDC— Momentarily operate TST switch to TST. (Scan command.)	After 200 seconds— At EADAS test set— RECEIVER MATCH NO. display indicates 00. ***Note:*** RECEIVER MATCH NO. display should have advanced while TURs were scanning.
71g	If RECEIVER MATCH NO. does not display 00— At EADAS test set— Momentarily depress RECEIVER CLEAR pushbutton.	
72g	Select one of the TURs to be tested. ♦	

STEP	ACTION	VERIFICATION
73g	▶At other TURs not to be tested— Block SC relay(s) not operated.	
74g	Repeat Steps 68 through 73g using Table F settings until TUR in trouble can be determined.	
75g	When TUR with trouble condition has been determined— At TUR— Replace GA, GB, and/or PLC relays.	
76g	Repeat Steps 68 through 70. ***Note:*** If trouble condition is not cleared, refer to Test L in Section 252-122-503, No. 4A Traffic Usage Recorder, SD-95738-01, Performance Test.	
77g	Remove all SC relay(s) blocking tools.	
78g	At ETDC— Set A0 through A3 switches to 0-0-0-0, respectively.	
79	Operate PWR switch to OFF.	
80	At EADAS test set— Operate PWR switch to OFF.	
81	Remove EADAS test set connection from TALK LINE or SWITCHMANS TALK CIRCUIT.	
82	AT ETDC— Remove data set terminal connections.	
83	Replace all input circuit packs in row 06, position 00-31.	
84	Operate PWR switch to ON.	
85	Set A0 through A3 switches to 0-0-0-1, respectively. (Restore command.)	
86	Momentarily operate TST switch to TST.	
87	Set A0 through A3 switches to 1-0-1-0 respectively. (Clear usage command.)	
88	Momentarily operate TST key.	
89	Set A0 through A3 switches to 0-0-0-0, respectively.◀	

STEP	ACTION	VERIFICATION
90	➧ Operate LT2 switch to RMT.	
91	Operate LT1 switch to RMT.	
I.	**EADAS Test Set Operation Test**	
1	At EADAS test set— Connect IPVF GRD jack to frame ground.	
2	Connect test set to 115-volt ac power outlet.	
3	Operate PWR switch to ON.	+5, +15, ±6V lamps lighted.
4	Set RECEIVER controls as follows: WORD LENGTH switches 8, 4, 2, and 1 to up position. MODE switch to RECEIVE & MATCH. CHANNEL NO. switch to OFF. CONT/ONCE switch to CONT.	
5	Set common control BIN/ASCII switch to BIN.	
6	Set TDRS/EADAS switch of TRANSMITTER to EADAS.	
7	Set BAUD switch of TRANSMITTER to 1200.	
8	Set WORD LENGTH switches 8, 4, 2, and 1 of TRANSMITTER to up position.	
9	Set NO. WORDS switch of TRANSMITTER to 256.	
10	Set RECEIVER switches from left to right as follows:	
10	0-1-0-1-0-1-0-1-0-1-0-1-1-1-1	
11	Set TRANSMITTER switches as follows: (22-15) 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 0 0 1 0 1 0 1 0 1 0 1 0 1 1 1 1	
12	Using 2P13A cord, connect EIA XMTR jack to EIA REC jack.	
13	Momentarily depress STOP pushbutton.	
14	Momentarily depress LOAD CLEAR pushbutton.	
15	Momentarily depress RECEIVER CLEAR pushbutton. ➧	

STEP	ACTION	VERIFICATION
16	♦Momentarily depress START pushbutton.	TRANSMITTER IDLE lamp lighted. RECEIVER MATCH NO. indicates 56.
17a	If RECEIVER MATCH NO. does not indicate 56— Repeat Steps 4 through 16, and if RECEIVER MATCH NO. still does not indicate 56, test set is faulty.	
18b	If RECEIVER MATCH NO. does indicate 56— Set RECEIVER switches from left to right as follows: 1-0-1-0-1-0-1-0-1-0-1-0-1-1-1	
19b	Set TRANSMITTER switches as follows: (22-15) 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 1 1	
20b	Momentarily depress STOP pushbutton.	
21b	Momentarily depress LOAD CLEAR pushbutton.	
22b	Momentarily depress RECEIVER CLEAR pushbutton.	
23b	Momentarily depress START pushbutton.	TRANSMITTER IDLE lamp lighted. RECEIVER MATCH NO. indicates 56.
24a	If RECEIVER MATCH NO. does not indicate 56— Repeat Steps 18b through 23b, and if RECEIVER MATCH NO. still does not indicate 56, test set is faulty.	
25b	If RECEIVER MATCH NO. does indicate 56— Remove cord between EIA XMTR and EIA REC jacks.	
26	Proceed to verification test to be performed.♦	

TABLE B

Note : The INNET TERM columns are used for J options only. With G option the INNET TERM is the same as the REGISTER NO. See Fig. 5 for INNET terminal arrangement with G option.

REGISTER NO.	INNET NO.	INNET TERM	RECEIVER MATCH SW. SETTINGS	REGISTER NO.	INNET NO.	INNET TERM	RECEIVER MATCH SW. SETTINGS
0		000	Not used	48		003	010000110000011
1		010	Not used	49		013	000000110001011
2		020	000000000010011	50		023	000000110010011
3		030	010000000011011	51		033	010000110011011
4		040	000000000100011	52		043	000000110100011
5		050	010000000101011	53		053	010000110101011
6		060	010000000110011	54		063	010000110110011
7		070	000000000111011	55		073	000000110111011
8		080	000000001000011	56		083	000000111000011
9		090	010000001001011	57		093	010000111001011
10		100	010000001010011	58		103	010000111010011
11		110	000000001011011	59		113	000000111011011
12		120	010000001100011	60		123	010000111100011
13		130	000000001101011	61		133	000000111101011
14		140	000000001110011	62		143	000000111110011
15		150	010000001111011	63		153	010000111111011
16		001	000000010000011	64		005	000001000000011
17	0	011	010000010001011	65	0	015	010001000001011
18		021	010000010010011	66		025	010001000010011
19		031	000000010011011	67		035	000001000011011
20		041	010000010100011	68		045	010001000100011
21		051	000000010101011	69		055	000001000101011
22		061	000000010110011	70		065	000001000110011
23		071	010000010111011	71		075	010001000111011
24		081	010000011000011	72		085	010001001000011
25		091	000000011001011	73		095	000001001001011
26		101	000000011010011	74		105	000001001010011
27		111	010000011011011	75		115	010001001011011
28		121	000000011100011	76		125	000001001100011
29		131	010000011101011	77		135	010001001101011
30		141	010000011110011	78		145	010001001110011
31		151	000000011111011	79		155	000001001111011
32		002	000000100000011	80		006	010001010000011
33		012	010000100001011	81		016	000001010001011
34		022	010000100010011	82		026	000001010010011
35		032	000000100011011	83		036	010001010011011
36		042	010000100100011	84		046	000001010100011
37		052	000000100101011	85		056	010001010101011
38		062	000000100110011	86		066	010001010110011
39		072	010000100111011	87		076	000001010111011
40		082	010000101000011	88		086	000001011000011
41		092	000000101001011	89		096	010001011001011
42		102	000000101010011	90		106	010001011010011
43		112	010000101011011	91		116	000001011011011
44		122	000000101100011	92		126	010001011100011
45		132	010000101101011	93		136	000001011101011
46		142	010000101110011	94		146	000001011110011
47		152	000000101111011	95		156	010001011111011

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
96		007	010001100000011	144		002	010010010000011
97		017	000001100001011	145		012	000010010001011
98		027	000001100010011	146		022	000010010010011
99		037	010001100011011	147		032	010010010011011
100		047	000001100100011	148		042	000010010100011
101		057	010001100101011	149		052	010010010101011
102		067	010001100110011	150		062	010010010110011
103	0	077	000001100111011	151		072	000010010111011
104		087	000001101000011	152		082	000010011000011
105		097	010001101001011	153		092	010010011001011
106		107	010001101010011	154		102	010010011010011
107		117	000001101011011	155		112	000010011011011
108		127	010001101100011	156		122	010010011100011
109		137	000001101101011	157		132	000010011101011
110		147	000001101110011	158		142	000010011110011
111		157	010001101111011	159		152	010010011111011
112		000	000001110000011	160		003	010010100000011
113		010	010001110001011	161		013	000010100001011
114		020	010001110010011	162		023	000010100010011
115		030	000001110011011	163		033	010010100011011
116		040	010001110100011	164		043	000010100100011
117		050	000001110101011	165		053	010010100101011
118		060	000001110110011	166	1	063	010010100110011
119		070	010001110111011	167		073	000010100111011
120		080	010001111000011	168		083	000010101000011
121		090	000001111001011	169		093	010010101001011
122		100	000001111010011	170		103	010010101010011
123		110	010001111011011	171		113	000010101011011
124		120	000001111100011	172		123	010010101100011
125		130	010001111101011	173		133	000010101101011
126		140	010001111110011	174		143	000010101110011
127		150	000001111111011	175		153	010010101111011
128	1	001	000010000000011	176		005	000010110000011
129		011	010010000001011	177		015	010010110001011
130		021	010010000010011	178		025	010010110010011
131		031	000010000011011	179		035	000010110011011
132		041	010010000100011	180		045	010010110100011
133		051	000010000101011	181		055	000010110101011
134		061	000010000110011	182		065	000010110110011
135		071	010010000111011	183		075	010010110111011
136		081	010010001000011	184		085	010010111000011
137		091	000010001001011	185		095	000010111001011
138		101	000010001010011	186		105	000010111010011
139		111	010010001011011	187		115	010010111011011
140		121	000010001100011	188		125	000010111100011
141		131	010010001101011	189		135	010010111101011
142		141	010010001110011	190		145	010010111110011
143		151	000010001111011	191		155	000010111111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
192		006	010011000000011	240		001	010011110000011
193		016	000011000001011	241		011	000011110001011
194		026	000011000010011	242		021	000011110010011
195		036	010011000011011	243		031	010011110011011
196		046	000011000100011	244		041	000011110100011
197		056	010011000101011	245		051	010011110101011
198		066	010011000110011	246		061	010011110110011
199		076	000011000111011	247		071	000011110111011
200		086	000011001000011	248		081	000011111000011
201		096	010011001001011	249		091	010011111001011
202		106	010011001010011	250		101	010011111010011
203		116	000011001011011	251		111	000011111011011
204		126	010011001100011	252		121	010011111100011
205		136	000011001101011	253		131	000011111101011
206	1	146	000011001110011	254		141	000011111110011
207		156	010011001111011	255		151	010011111111011
208		007	000011010000011	256		022	000100000000011
209		017	010011010001011	257		012	010100000001011
210		027	010011010010011	258		022	010100000010011
211		037	000011010011011	259		032	000100000011011
212		047	010011010100011	260		042	010100000100011
213		057	000011010101011	261		052	000100000101011
214		067	000011010110011	262		062	000100000110011
215		077	010011010111011	263	2	072	010100000111011
216		087	010011011000011	264		082	010100001000011
217		097	000011011001011	265		092	000100001001011
218		107	000011011010011	266		102	000100001010011
219		117	010011011011011	267		112	010100001011011
220		127	000011011100011	268		122	000100001100011
221		137	010011011101011	269		132	010100001101011
222		147	010011011110011	270		142	010100001110011
223		157	000011011111011	271		152	000100001111011
224		000	000011100000011	272		003	010100010000011
225		010	010011100001011	273		013	000100010001011
226		020	010011100010011	274		023	000100010010011
227		030	000011100011011	275		033	010100010011011
228		040	010011100100011	276		043	000100010100011
229		050	000011100101011	277		053	010100010101011
230		060	000011100110011	278		063	010100010110011
231		070	010011100111011	279		073	000100010111011
232	2	080	010011101000011	280		083	000100011000011
233		090	000011101001011	281		093	010100011001011
234		100	010011101010011	282		103	010100011010011
235		110	010011101011011	283		113	000100011011011
236		120	000011101100011	284		123	010100011100011
237		130	010011101101011	285		133	000100011101011
238		140	010011101110011	286		143	000100011110011
239		150	000011101111011	287		153	010100011111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
288		005	010100100000011	336		000	000101010000011
289		015	000100100001011	337		010	010101010001011
290		025	000100100010011	338		020	010101010010011
291		035	010100100011011	339		030	000101010011011
292		045	000100100100011	340		040	010101010100011
293		055	010100100101011	341		050	000101010101011
294		065	010100100110011	342		060	000101010110011
295		075	000100100111011	343		070	010101010111011
296		085	000100101000011	344		080	010101011000011
297		095	010100101001011	345		090	000101011001011
298		105	010100101010011	346		100	000101011010011
299		115	000100101011011	347		110	010101011011011
300		125	010100101100011	348		120	000101011100011
301		135	000100101101011	349		130	010101011101011
302		145	000100101110011	350		140	010101011110011
303		155	010100101111011	351		150	000101011111011
304		006	000100110000011	352		001	000101100000011
305		016	010100110001011	353		011	010101100001011
306		026	010100110010011	354		021	010101100010011
307		036	000100110011011	355		031	000101100011011
308		046	010100110100011	356	3	041	010101100100011
309		056	000100110101011	357		051	000101100101011
310		066	000100110110011	358		061	000101100110011
311		076	010100110111011	359		071	010101100111011
312	2	086	010100111000011	360		081	010101101000011
313		096	000100111001011	361		091	000101101001011
314		106	000100111010011	362		101	000101101010011
315		116	010100111011011	363		111	010101101011011
316		126	000100111100011	364		121	000101101100011
317		136	010100111101011	365		131	010101101101011
318		146	010100111110011	366		141	010101101110011
319		156	000100111111011	367		151	000101101111011
320		007	010101000000011	368		002	010101110000011
321		017	000101000001011	369		012	000101110001011
322		027	000101000010011	370		022	000101110010011
323		037	010101000011011	371		032	010101110011011
324		047	000101000100011	372		042	000101110100011
325		057	010101000101011	373		052	010101110101011
326		067	010101000110011	374		062	010101110110011
327		077	000101000111011	375		072	000101110111011
328		087	000101001000011	376		082	000101111000011
329		097	010101001001011	377		092	010101111001011
330		107	010101001010011	378		102	010101111010011
331		117	000101001011011	379		112	000101111011011
332		127	010101001100011	380		122	010101111100011
333		137	000101001101011	381		132	000101111101011
334		147	000101001110011	382		142	000101111110011
335		157	010101001111011	383		152	010101111111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
384		003	010110000000011	432		007	010110110000001
385		013	000110000001011	433		017	000110110001011
386		023	000110000010011	434		027	000110110010011
387		033	010110000011011	435		037	010110110011011
388		043	000110000100011	436		047	000110110100011
389		053	010110000101011	437		057	010110110101011
390		063	010110000110011	438		067	010110110110011
391		073	000110000111011	439	3	077	000110110111011
392		083	000110001000011	440		087	000110111000011
393		093	010110001001011	441		097	010110111001011
394		103	010110001010011	442		107	010110111010011
395		113	000110001011011	443		117	000110111011011
396		123	010110001100011	444		127	010110111100011
397		133	000110001101011	445		137	000110111101011
398		143	000110001110011	446		147	000110111110011
399		153	010110001111011	447		157	010110111111011
400		005	000110010000011	448		000	000111000000011
401		015	010110010001011	449		010	010111000001011
402		025	010110010010011	450		020	010111000010011
403		035	000110010011011	451		030	000111000011011
404		045	010110010100011	452		040	010111000100011
405	3	055	000110010101011	453		050	000111000101011
406		065	000110010110011	454		060	000111000110011
407		075	010110010111011	455		070	010111000111011
408		085	010110011000011	456		080	010111001000011
409		095	000110011001011	457		090	000111001001011
410		105	000110011010011	458		100	000111001010011
411		115	010110011011011	459		110	010111001011011
412		125	000110011100011	460		120	000111001100011
413		135	010110011101011	461		130	010111001101011
414		145	010110011110011	462		140	010111001110011
415		155	000110011111011	463		150	000111001111011
416		006	000110100000011	464	4	001	010111010000011
417		016	010110100001011	465		011	000111010001011
418		026	010110100010011	466		021	000111010010011
419		036	000110100011011	467		031	010111010011011
420		046	010110100100011	468		041	000111010100011
421		056	000110100101011	469		051	010111010101011
422		066	000110100110011	470		061	010111010110011
423		076	010110100111011	471		071	000111010111011
424		086	010110101000011	472		081	000111011000011
425		096	000110101001011	473		091	010111011001011
426		106	000110101010011	474		101	010111011010011
427		116	010110101011011	475		111	000111011011011
428		126	000110101100011	476		121	010111011100011
429		136	010110101101011	477		131	000111011101011
430		146	010110101110011	478		141	000111011110011
431		156	000110101111011	479		151	010111011111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
480		002	010111100000011	528		006	011000010000011
481		012	000111100001011	529		016	001000010001011
482		022	000111100010011	530		026	001000010010011
483		032	010111100011011	531		036	011000010011011
484		042	000111100100011	532		046	001000010100011
485		052	010111100101011	533		056	011000010101011
486		062	010111100110011	534		066	011000010110011
487		072	000111100111011	535		076	001000010111011
488		082	000111101000011	536		086	001000011000011
489		092	010111101001011	537		096	011000011001011
490		102	010111101010011	538		106	011000011010011
491		112	000111101011011	539		116	001000011011011
492		122	010111101100011	540		126	011000011100011
493		132	000111101101011	541		136	001000011101011
494		142	000111101110011	542		146	001000011110011
495		152	010111101111011	543	4	156	011000011111011
496		003	000111110000011	544		007	011000100000011
497		013	010111110001011	545		017	001000100001011
498		023	010111110010011	546		027	001000100010011
499		033	000111110011011	547		037	011000100011011
500		043	010111110100011	548		047	001000100100011
501		053	000111110101011	549		057	011000100101011
502	4	063	000111110110011	550		067	011000100110011
503		073	010111110111011	551		077	001000100111011
504		083	010111111000011	552		087	001000101000011
505		093	000111111001011	553		097	011000101001011
506		103	000111111010011	554		107	011000101010011
507		113	010111111011011	555		117	001000101011011
508		123	000111111100011	556		127	011000101100011
509		133	010111111101011	557		137	001000101101011
510		143	010111111110011	558		147	001000101110011
511		153	000111111111011	559		157	011000101111011
512		005	001000000000011	560		000	001000110000011
513		015	011000000001011	561		010	011000110001011
514		025	011000000010011	562		020	011000110010011
515		035	001000000011011	563		030	001000110011011
516		045	011000000100011	564		040	011000110100011
517		055	001000000101011	565		050	001000110101011
518		065	001000000110011	566		060	001000110110011
519		075	011000000111011	567		070	011000110111011
520		085	011000001000011	568	5	080	011000111000011
521		095	001000001001011	569		090	001000111001011
522		105	001000001010011	570		100	001000111010011
523		115	011000001011011	571		110	011000111011011
524		125	001000001100011	572		120	001000111100011
525		135	011000001101011	573		130	011000111101011
526		145	011000001110011	574		140	011000111110011
527		155	001000001111011	575		150	001000111111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
576	5	001	011001000000011	624	5	005	011001110000011
577		011	001001000001011	625		015	001001110001011
578		021	001001000010011	626		025	001001110010011
579		031	011001000011011	627		035	011001110011011
580		041	001001000100011	628		045	001001110100011
581		051	011001000101011	629		055	011001110101011
582		061	011001000110011	630		065	011001110110011
583		071	001001000111011	631		075	001001110111011
584		081	001001001000011	632		085	001001111000011
585		091	011001001001011	633		095	011001111001011
586		101	011001001010011	634		105	011001111010011
587		111	001001001011011	635		115	001001111011011
588		121	011001001100011	636		125	011001111100011
589		131	001001001101011	637		135	001001111101011
590		141	001001001110011	638		145	001001111110011
591		151	011001001111011	639		155	011001111111011
592		002	001001010000011	640		006	011010000000011
593		012	011001010001011	641		016	001010000001011
594		022	011001010010011	642		026	001010000010011
595		032	001001010011011	643		036	011010000011011
596		042	011001010100011	644		046	001010000100011
597		052	001001010101011	645		056	011010000101011
598		062	001001010110011	646		066	011010000110011
599		072	011001010111011	647		076	001010000111011
600		082	011001011000011	648		086	001010001000011
601		092	001001011001011	649		096	011010001001011
602		102	001001011010011	650		106	011010001010011
603		112	011001011011011	651		116	001010001011011
604		122	001001011100011	652		126	011010001100011
605		132	011001011101011	653		136	001010001101011
606		142	011001011110011	654		146	001010001110011
607		152	001001011111011	655		156	011010001111011
608		003	001001100000011	656		007	001010010000011
609		013	011001100001011	657		017	011010010001011
610		023	011001100010011	658		027	011010010010011
611		033	001001100011011	659		037	001010010011011
612		043	011001100100011	660		047	011010010100011
613		053	001001100101011	661		057	001010010101011
614		063	001001100110011	662		067	001010010110011
615		073	011001100111011	663		077	011010010111011
616		083	011001101000011	664		087	011010011000011
617		093	001001101001011	665		097	001010011001011
618		103	001001101010011	666		107	001010011010011
619		113	011001101011011	667		117	011010011011011
620		123	001001101100011	668		127	001010011100011
621		133	011001101101011	669		137	011010011101011
622		143	011001101110011	670		147	011010011110011
623		153	001001101111011	671		157	001010011111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
672		000	001010100000011	720		003	011011010000011
673		010	011010100001011	721		013	001011010001011
674		020	011010100010011	722		023	001011010010011
675		030	001010100011011	723		033	011011010011011
676		040	011010100100011	724		043	001011010100011
677		050	001010100101011	725		053	011011010101011
678		060	001010100110011	726		063	011011010110011
679		070	011010100111011	727		073	001011010111011
680		080	011010101000011	728		033	001011011000011
681		090	001010101001011	729		093	011011011001011
682		100	001010101010011	730		103	011011011010011
683		110	011010101011011	731		113	001011011011011
684		120	001010101100011	732		123	011011011100011
685		130	011010101101011	733		133	001011011101011
686		140	011010101110011	734		143	001011011110011
687		150	001010101111011	735		153	011011011111011
688		001	011010110000011	736		005	011011100000011
689		011	001010110001011	737		015	001011100001011
690		021	001010110010011	738		075	001011100010011
691		031	011010110011011	739		035	011011100011011
692		041	001010110100011	740		045	001011100100011
693		051	011010110101011	741		055	011011100101011
694		061	011010110110011	742		065	011011100110011
695	6	071	001010110111011	743	6	075	001011100111011
696		081	001010111000011	744		085	001011101000011
697		091	011010111001011	745		095	011011101001011
698		101	011010111010011	746		105	011011101010011
699		111	001010111011011	747		115	001011101011011
700		121	011010111100011	748		125	011011101100011
701		131	001010111101011	749		135	001011101101011
702		141	001010111110011	750		145	001011101110011
703		151	011010111111011	751		155	011011101111011
704		002	001011000000011	752		006	001011110000011
705		012	011011000001011	753		016	011011110001011
706		022	011011000010011	754		026	011011110010011
707		032	001011000011011	755		036	001011110011011
708		042	011011000100011	756		046	011011110100011
709		052	001011000101011	757		056	001011110101011
710		062	001011000110011	758		066	001011110110011
711		072	011011000111011	759		076	011011110111011
712		082	011011001000011	760		086	011011111000011
713		092	001011001001011	761		096	001011111001011
714		102	001011001010011	762		106	001011111010011
715		112	011011001011011	763		116	011011111011011
716		122	001011001100011	764		126	001011111100011
717		132	011011001101011	765		136	011011111101011
718		142	011011001110011	766		146	011011111110011
719		152	001011001111011	767		156	001011111111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET		RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET		RECEIVER MATCH SW. SETTINGS
	NO.	TERM			NO.	TERM	
768		007	011100000000011	816		002	011100110000011
769		017	001100000001011	817		012	001100110001011
770		027	001100000010011	818		022	001100110010011
771		037	011100000011011	819		032	011100110011011
772		047	001100000100011	820		042	001100110100011
773		057	011100000101011	821		052	011100110101011
774		067	011100000110011	822		062	011100110110011
775		077	001100000111011	823		072	001100110111011
776	6	087	001100001000011	824		082	001100111000011
777		097	011100001001011	825		092	011100111001011
778		107	011100001010011	826		102	011100111010011
779		117	001100001011011	827		112	001100111011011
780		127	011100001100011	828		122	011100111100011
781		137	001100001101011	829		132	001100111101011
782		147	001100001110011	830		142	001100111110011
783		157	011100001111011	831		152	011100111111011
784		000	001100010000011	832		003	001101000000011
785		010	011100010001011	833		013	011101000001011
786		020	011100010010011	834		023	011101000010011
787		030	001100010011011	835		033	001101000011011
788		040	011100010100011	836		043	011101000100011
789		050	001100010101011	837		053	001101000101011
790		060	001100010110011	838		063	001101000110011
791		070	011100010111011	839		073	011101000111011
792		080	011100011000011	840	7	083	011101001000011
793		090	001100011001011	841		093	001101001001011
794		100	001100011010011	842		103	001101001010011
795		110	011100011011011	843		113	011101001011011
796		120	001100011100011	844		123	001101001100011
797		130	011100011101011	845		133	011101001101011
798		140	011100011110011	846		143	011101001110011
799		150	001100011111011	847		153	001101001111011
800	7	001	001100100000011	848		005	011101010000011
801		011	011100100001011	849		015	001101010001011
802		021	011100100010011	850		025	001101010010011
803		031	001100100011011	851		035	011101010011011
804		041	011100100100011	852		045	001101010100011
805		051	001100100101011	853		055	011101010101011
806		061	001100100110011	854		065	011101010110011
807		071	011100100111011	855		075	001101010111011
808		081	011100101000011	856		085	001101011000011
809		091	001100101001011	857		095	011101011001011
810		101	001100101010011	858		105	011101011010011
811		111	011100101011011	859		115	001101011011011
812		121	001100101100011	860		125	011101011100011
813		131	011100101101011	861		135	001101011101011
814		141	011100101110011	862		145	001101011110011
815		151	001100101111011	863		155	011101011111011

*See Note on first sheet of Table B.

TABLE B (Contd)

INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	INPUT NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
864		006	011101100000011	912		001	011110010000011
865		016	001101100001011	913		011	001110010001011
866		026	001101100010011	914		021	001110010010011
867		036	011101100011011	915		031	011110010011011
868		046	001101100100011	916		041	001110010100011
869		056	011101100101011	917		051	011110010101011
870		066	011101100110011	918		061	011110010110011
871		076	001101100111011	919		971	001110010111011
872		086	001101101000011	920		081	001110011000011
873		096	011101101001011	921		091	011110011001011
874		106	011101101010011	922		101	011110011010011
875		116	001101101011011	923		111	001110011011011
876		126	011101101100011	924		121	011110011100011
877	7	136	001101101101011	925		131	001110011101011
878		146	001101101110011	926		141	001110011110011
879		156	011101101111011	927		151	011110011111011
880		007	001101110000011	928		002	011110100000011
881		017	011101110001011	929		012	001110100001011
882		027	011101110010011	930		022	001110100010011
883		037	001101110011011	931		032	011110100011011
884		047	011101110100011	932		042	001110100100011
885		057	001101110101011	933	8	052	011110100101011
886		067	001101110110011	934		062	011110100110011
887		077	011101110111011	935		072	001110100111011
888		087	011101111000011	936		082	001110101000011
889		097	001101111001011	937		092	011110101001011
890		107	001101111010011	938		102	011110101010011
891		117	011101111011011	939		112	001110101011011
892		127	001101111100011	940		122	011110101100011
893		137	011101111101011	941		132	001110101101011
894		147	011101111110011	942		142	001110101110011
895		157	001101111111011	943		152	011110101111011
896		000	001110000000011	944		003	001110110000011
897		010	011110000001011	945		013	011110110001011
898		020	011110000010011	946		023	011110110010011
899		030	001110000011011	947		033	001110110011011
900		040	011110000100011	948		043	011110110100011
901		050	001110000101011	949		053	001110110101011
902		060	001110000110011	950		063	001110110110011
903		070	011110000111011	951		073	011110110111011
904	8	080	011110001000011	952		083	011110111000011
905		090	001110001001011	953		093	001110111001011
906		100	001110001010011	954		103	001110111010011
907		110	011110001011011	955		113	011110111011011
908		120	001110001100011	956		123	001110111100011
909		130	011110001101011	957		133	011110111101011
910		140	011110001110011	958		143	011110111110011
911		150	001110001111011	959		153	001110111111011

*See Note on first sheet of Table B.

TABLE B (Contd)

REGISTER NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS	REGISTER NO.	*INNET NO.	*INNET TERM	RECEIVER MATCH SW. SETTINGS
960		005	011111000000011	992		007	001111100000011
961		015	001111000001011	993		017	011111100001011
962		025	001111000010011	994		027	011111100010011
963		035	011111000011011	995		037	001111100011011
964		045	001111000100011	996		047	011111100100011
965		055	011111000101011	997		057	001111100101011
966		065	011111000110011	998		067	001111100110011
967		075	001111000111011	999		077	011111100111011
968		085	001111001000011	1000		087	011111101000011
969		095	011111001001011	1001		097	001111101001011
970		105	011111001010011	1002		107	001111101010011
971		115	001111001011011	1003		117	011111101011011
972		125	011111001100011	1004		127	001111101100011
973		135	001111001101011	1005		137	011111101101011
974		145	001111001110011	1006		147	011111101110011
975	8	155	011111001111011	1007	9	157	001111101111011
976		006	001111010000011	1008		000	011111110000011
977		016	011111010001011	1009		010	001111110001011
978		026	011111010010011	1010		020	001111110010011
979		036	001111010011011	1011		001	011111110011011
980		046	011111010100011	1012		011	001111110100011
981		056	001111010101001	1013		021	011111110101011
982		066	001111010110011	1014		002	011111110110011
983		076	011111010111011	1015		012	001111110111011
984		086	011111011000011	1016		022	001111111000011
985		096	001111011001011	1017		003	011111111001011
986		106	001111011010011	1018		013	011111111010011
987		116	011111011011011	1019		023	001111111011011
988		126	001111011100011	1020		005	011111111100011
989		136	011111011101011	1021		015	001111111101011
990		146	011111011110011	1022		025	001111111110011
991		156	001111011111011	1023		006	011111111111011

*See Note on first sheet of Table B.

TABLE C

ETDC UNDER TEST	DATA SET TERMINAL ASSIGNMENT	
	G OPTION	J OPTION
	INNET 04	INNET 09
Home	A2, A3	50, 51
Rmt 1	A6, A7	54, 55
Rmt 2	B0, B1	60, 61
Rmt 3	B4, B5	64, 65
Rmt 4	B8, B9	70, 71
Rmt 5	C2, C3	74, 75

◗TABLE D◖

TDC INTERFACE MODULE SWITCH SETTINGS

SWITCH SETTING	DATA MONITORED FROM
H	Home ETDC
R1	RMT1 ETDC
R2	RMT2 ETDC
R3	RMT3 ETDC
R4	RMT4 ETDC
R5	RMT5 ETDC
C	COMPUTER

◗TABLE E◖

ICUR WORD COUNT

NO. OF TURs PER ETDC	EXPECTED DISPLAY ON RECEIVE MATCH COUNTER	TOTAL WORD COUNT
1	02	1202
2	04	2404
3	06	3606
4	08	4808

♦TABLE F♦

EADAS TEST SET-TUR SELECTION

TUR UNDER TEST	RECEIVE MATCH KEYS (LEFT TO RIGHT)
0	0 0 1 1 0 0 1 1 1 1 1 1 1 1 1
1	0 1 1 1 0 1 1 1 1 1 1 1 1 1 1
2	0 1 1 1 1 0 1 1 1 1 1 1 1 1 1
3	0 0 1 1 1 1 1 1 1 1 1 1 1 1 1

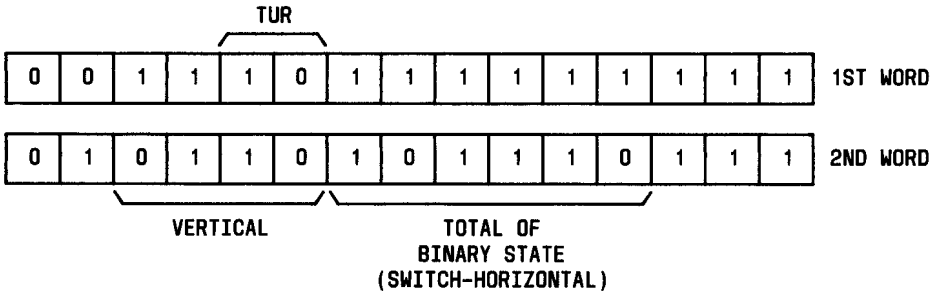
Note: Regardless of central office numbering, the 4A TUR number transmitted corresponds to the ICUR input circuit equipment location that the 4A TUR is cabled to:

LOC 03-11 Transmits as number 0
LOC 03-12 Transmits as number 1
LOC 03-13 Transmits as number 2
LOC 03-14 Transmits as number 3

TABLE G
SWITCH-HORIZONTAL TRANSLATION TABLE
(ALSO SEE FIGURE 6)

TOTAL OF BINARY STATE	SWITCH - HORIZONTAL		TOTAL OF BINARY STATE	SWITCH - HORIZONTAL	
00	0	0	30	3	0
01	0	1	31	3	1
02	0	2	32	3	2
03	0	3	33	3	3
04	0	4	34	3	4
05	0	5	35	3	5
06	0	6	36	3	6
07	0	7	37	3	7
08	0	8	38	3	8
09	0	9	39	3	9
10	1	0	40	4	0
11	1	1	41	4	1
12	1	2	42	4	2
13	1	3	43	4	3
14	1	4	44	4	4
15	1	5	45	4	5
16	1	6	46	4	6
17	1	7	47	4	7
18	1	8	48	4	8
19	1	9	49	4	9
20	2	0	50	5	0
21	2	1	51	5	1
22	2	2	52	5	2
23	2	3	53	5	3
24	2	4	54	5	4
25	2	5	55	5	5
26	2	6	56	5	6
27	2	7	57	5	7
28	2	8	58	5	8
29	2	9	59	5	9

EXAMPLE:



TUR NO: 2
SWITCH NO: 4
HORIZONTAL NO: 6
VERTICAL NO: 6

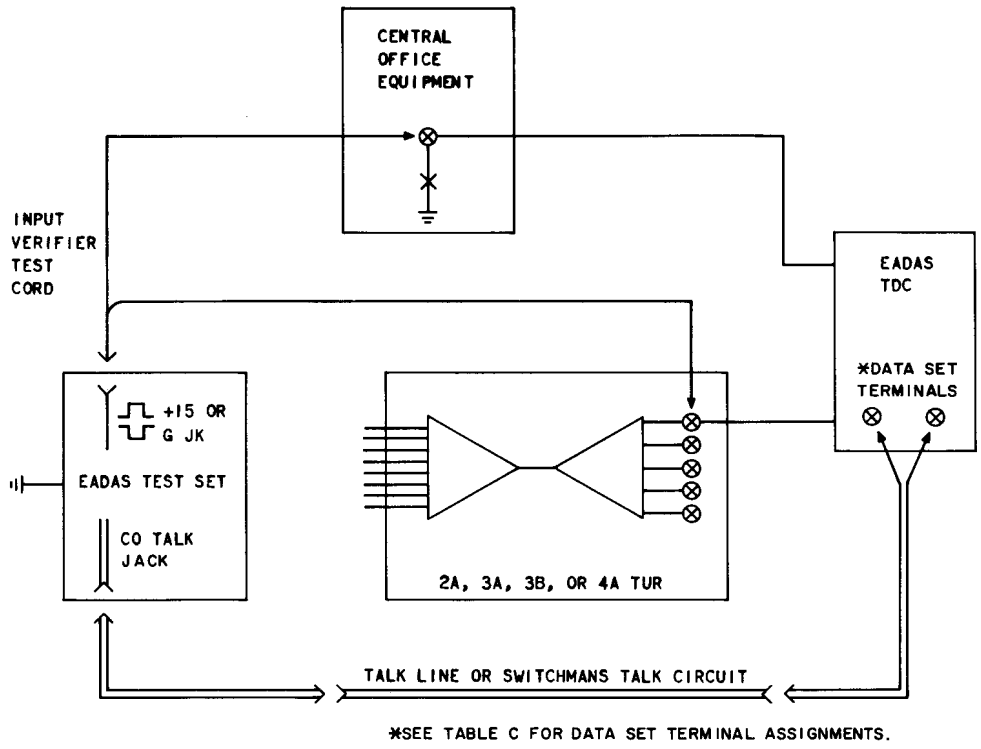


Fig. 1—Test Arrangement for Connection Verification Tests A and B From Associated Equipment

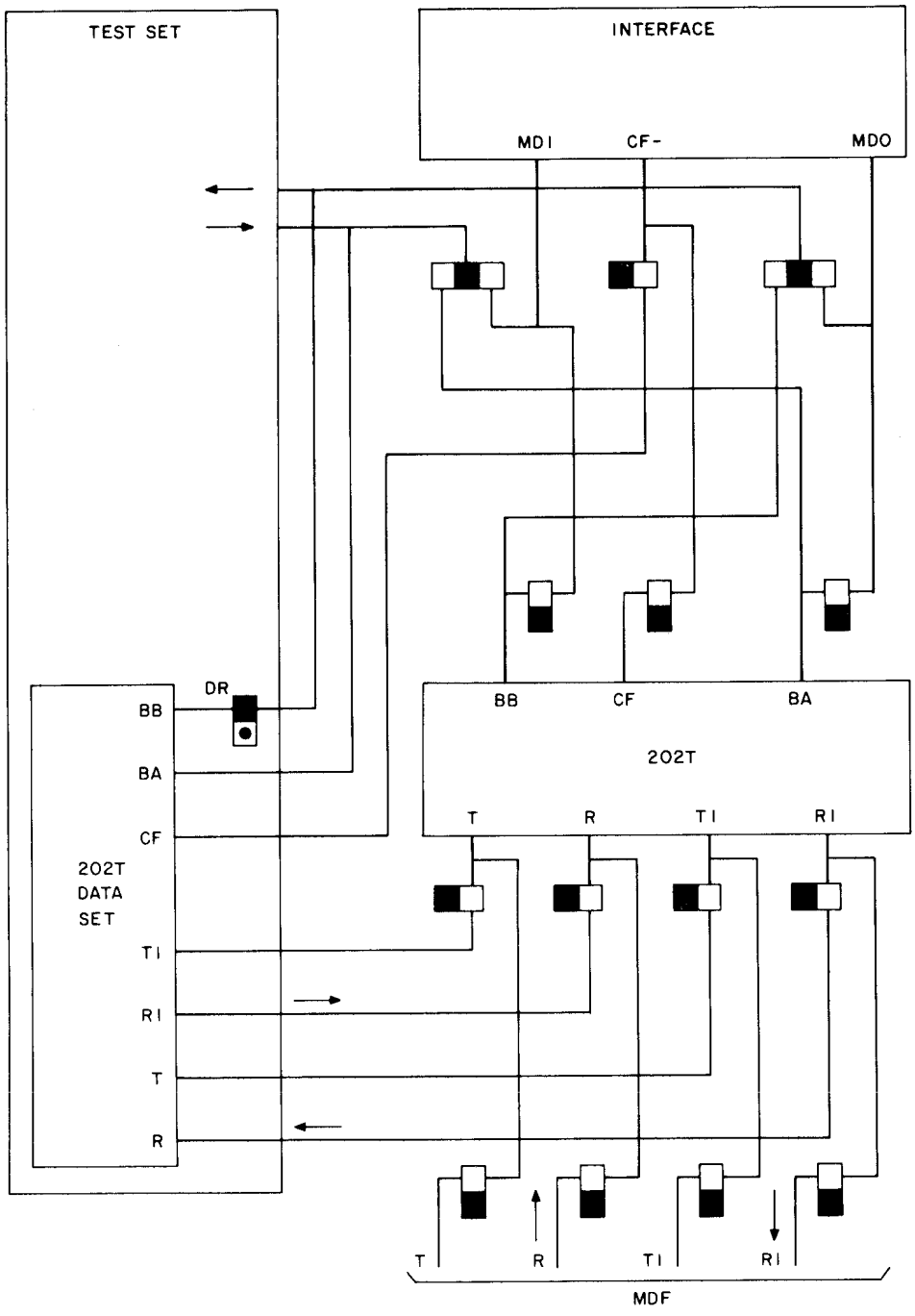


Fig. 2—Arrangement of Switches on EADAS Test Set

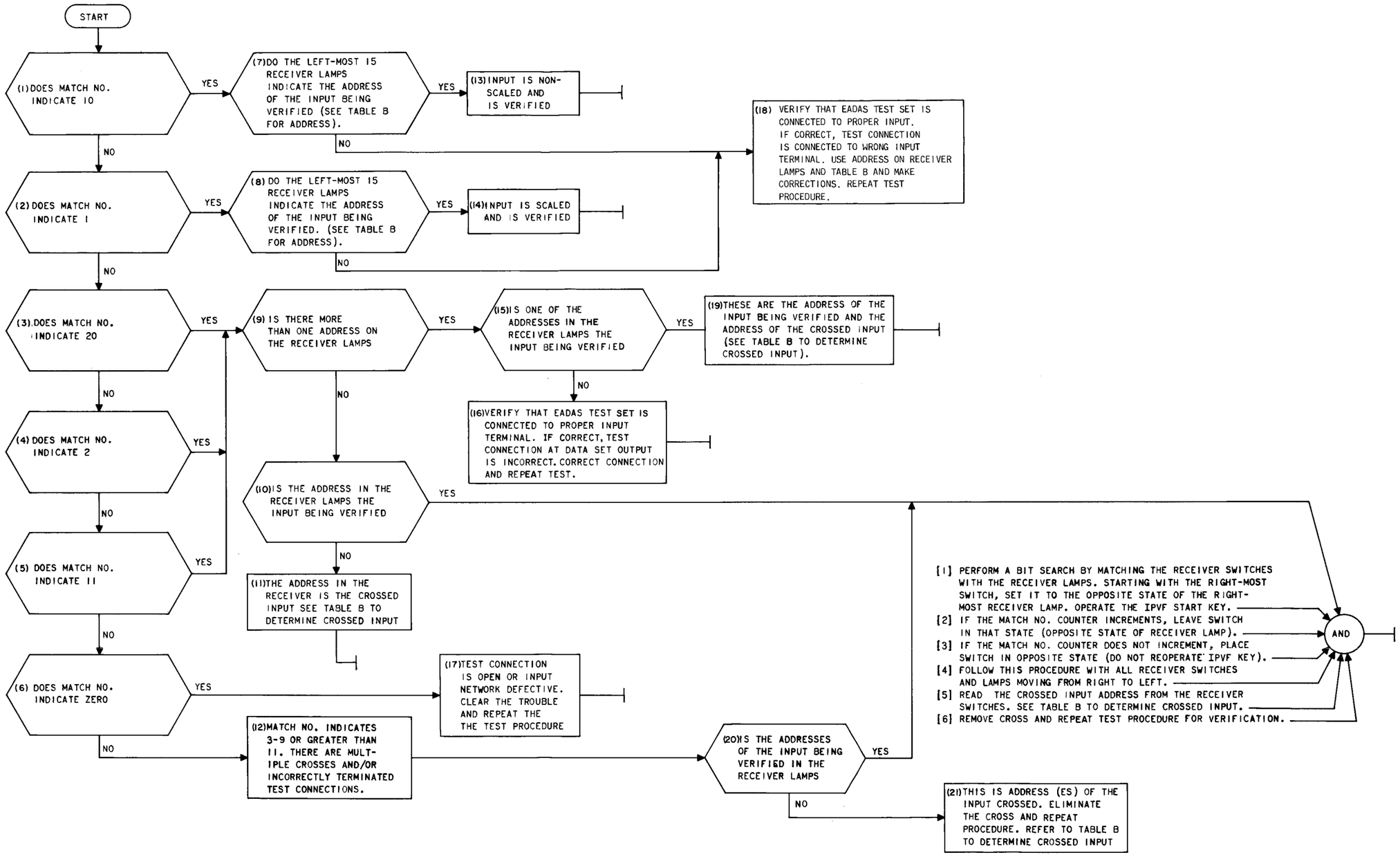


Fig. 3—Flow Chart for Verifying Inputs and Locating Crossed Inputs

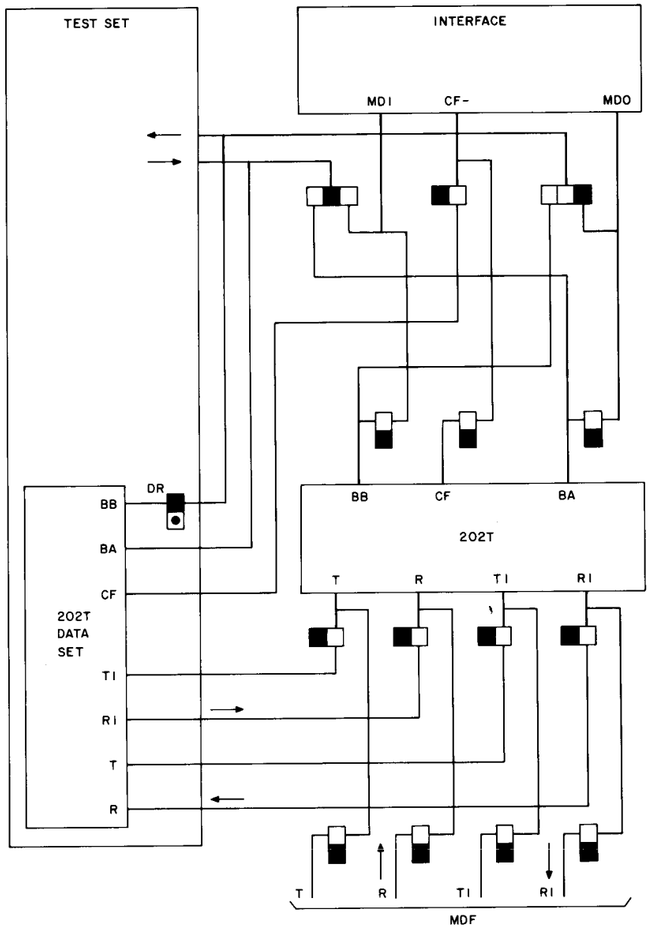


Fig. 4—Arrangement of Switches on EADAS Test Set When TDC Module, ED-3B061, Is Used

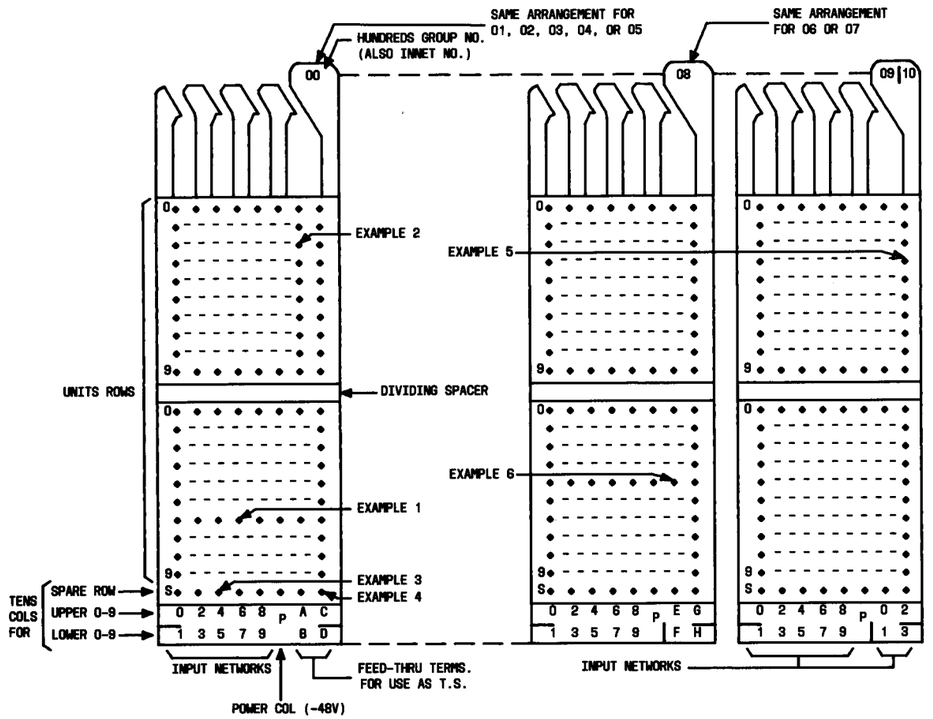


Fig. 5—Arrangement of Input Network (INNETS) for the G Option

Fig. 4 and 5

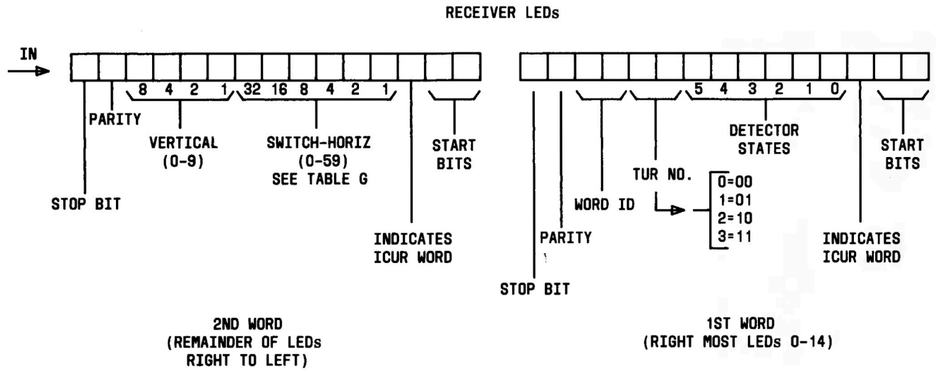


Fig. 6—ICUR Word Format on EADAS Test Set (SD-3B220-01) Receiver LEDs

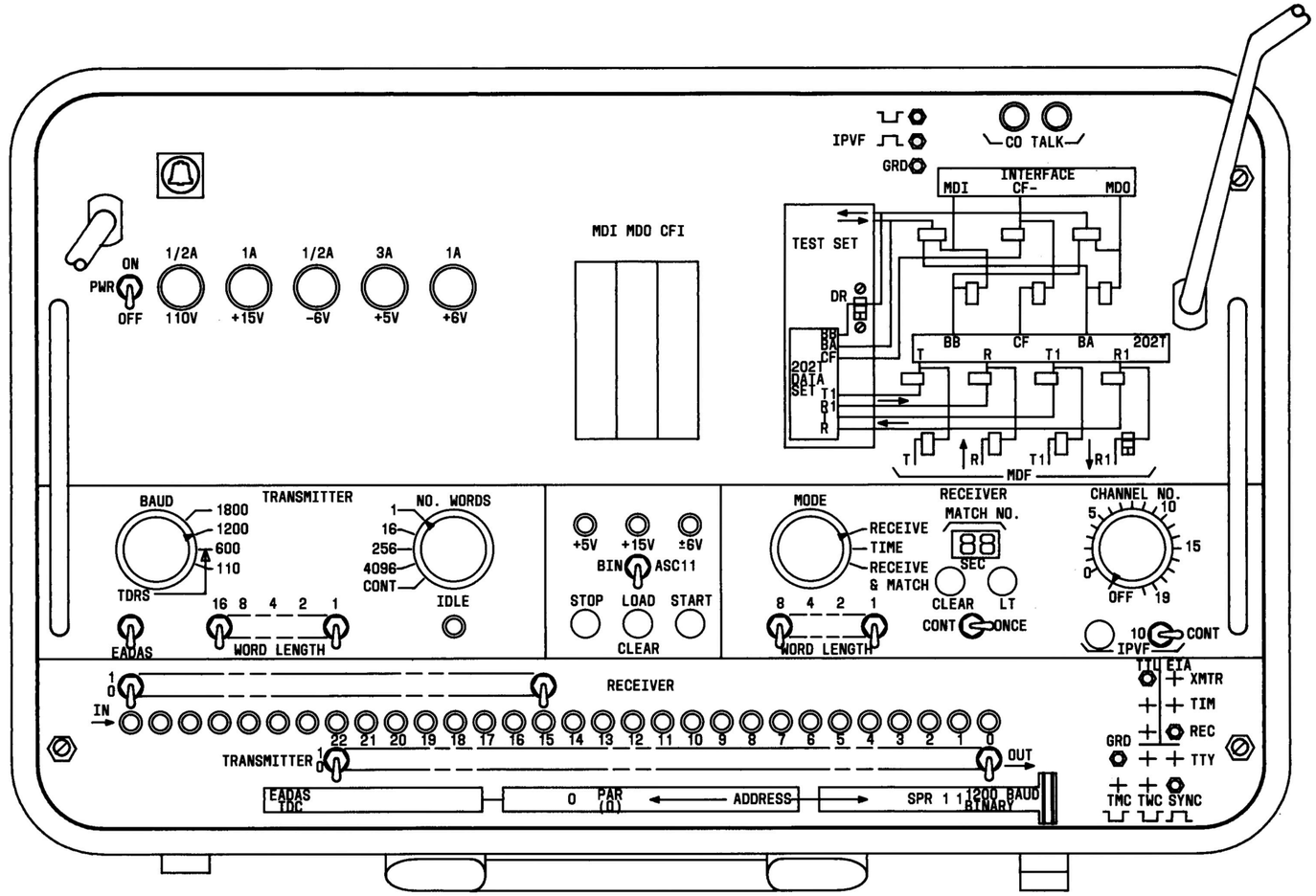


Fig. 7—EADAS Test Set

Fig. 6 and 7