TRANSVERTERS SD-25591-01 AND SD-26161-01
TESTS USING OFFICE TEST FRAME TEST CIRCUIT SD-27633-01 (H-595-950)
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing transverters SD-25591-01 and SD-26161-01 using office test frame test circuit (OTF) SD-27633-01 (H-595-950), Issue 1 and the trouble indicator and connector circuit (TIC) SD-27634-01, Issue 1 in No. 5 crossbar offices.

1.02 This section is reissued for the following reasons:

(a) To revise all tests to provide more detailed verification information.

(b) To add Test L to provide testing procedures for billing of 411 and 555-1212 directory assistance calls using 2-line AMA tape entries.

(c) To revise Part 3, to remove reference to operation of OGT key.

(d) To make minor changes as required.

This reissue affects Equipment Test Lists.

1.03 The tests covered are:

1.04 Test E requires making a recorder busy and Test F requires making a translator busy.

1.05 Tests of trouble detecting features and miscellaneous tests, are covered in Section 218-472-503 for transverter SD-25591-01 and Section 218-737-501 for transverter SD-26161-01.

1.06 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Parts 3 and 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is 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.

1.07 Local instructions should be followed for recording and reporting any register operations caused by performing these tests. The register operations are as follows:

TEST	REGISTER
A	PC, TTR
B	PC, TTR, APC*
C	PC
D	PC, TST, APC*
E	PC, BBF†, TTR‡
F	PC, BBF†, APC*
G	PC, BBF†, APC*
H	PC
I	PC, APC*
J	PC
K	PC
L	◗PC◖

*When ANI Transverter is used.

†When a condition arises that allows a bulk-billed call to be completed free of charge.

‡If recorder is in trouble at time of test seizure.

2. APPARATUS

All Tests

2.01 Office test frame test circuit SD-27633-01.

2.02 Office test frame trouble indicator and connector circuit SD-27634-01.

2.03 Patching cords as required, P3D cord, 6 feet long equipped with two 309 plugs (3P3A cord).

2.04 322A (make-busy) plugs as required.

Test A

2.05 Two testing cords, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord), one KS-6278 connecting clip, and one 624B (terminal connector) tool.

2.06 19JH resistor.

2.07 18CR resistor.

Tests B, D

2.08 Blocking and insulating tools as required. Use and apply as covered in Section 069-020-801.

Test C

2.09 Patching cord, P3BF cord, 7 feet long, equipped with a 351A plug and 464B plug (3P34A cord).

Tests C, E, I Through ▶L◀

2.10 329A (make-busy) plugs as required.

Test E

2.11 Two testing cords, W2W cord, 10 feet long, equipped with a 310 plug, 360B tool, 360C tool (2W17C cord), and 607A (relay winding connector) tool or one 624B (terminal connector) tool.

Tests E, G

2.12 Two testing cords, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord) and two 624B (terminal connector) tools.

Tests H, I

2.13 Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).

2.14 Patching cord, P3U cord, 7 feet long, equipped with a 310 plug and 351A plug (3P27B cord).

Test K

2.15 KS-14343 tape reader.

2.16 Red china marking pencil.

3. PREPARATION

Note: Refer to 1.06 and 1.07.

All Tests

STEP	ACTION	VERIFICATION
1	At OTF— Restore all keys and switches.	All lamps extinguished.
2	At TIC— Momentarily operate RLS key.	All lamps extinguished.
3	At OTF— Operate MCB key.	
4	Operate TV_ key to select transverter to be tested.	
5	Operate MKR_ key to select completing marker.	
6a	If more than one transverter is provided— At jack, lamp, and key circuit— Insert 322A make-busy plug into TVMB_ jack of transverter under test.	

Tests A Through G, J Through ▶L◀

7	Operate OTL key.	
8	Select from office records an outgoing sender of type required by trunk used in test.	

STEP	ACTION	VERIFICATION
9	Patch SDR jack in MB2 jack field to MB_ jack of sender selected.	
10	Patch 0 to 9 jacks in MB1 jack field to MB_ jacks of all other senders in same group.	
11b	If digit for access code is required— Operate PREL DIGIT switch.	

4. METHOD

A. Continuity, False Ground, and False Battery Tests of TIC and ICK Leads (LAMA Transverters)

STEP	ACTION	VERIFICATION
12	Set A through K dial switches, as required to select LAMA detailed billed route served by sender used in test and any test line number.	
13	Operate _D key for number of digits to be dialed.	
14	Operate CL_ key, as required to select class of service for access to route of call.	
15	Operate TVR key.	
16	At sender used in test— Using 893 testing cords and 19JH resistor, connect 850-ohm resistance ground in series with terminal 28 on terminal strip B.	
17	At OTF— Operate ST key.	Overflow tone heard. At TIC— TV, DR_, DNK, RD, XX, MB_, RN_ lamps lighted. CN_, S_ lamps lighted identifying transverter connector number and sender position in connector. FU_, VG_, HG_, VF_ lamps lighted identifying line location of originating test line. OFF_, TH_, HN_, T_, U_ lamps lighted identifying directory number of originating test line.
18	At OTF— Restore ST key.	Overflow tone silenced.
19	At TIC— Momentarily operate RLS key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
20	At sender used in test— Disconnect 850-ohm resistance ground from terminal 28 on terminal strip B.	
21	Using 893 testing cords and 18CR resistor, connect 2000-ohm resistance battery in series with terminal 28 on terminal strip B.	
22	Repeat Steps 17 through 19.	
23	At sender used in test— Disconnect 2000-ohm resistance battery from terminal 28 on terminal strip B.	
24	At OTF— Restore all keys and switches not required in next test.	
25c	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
26c	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
27a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

B. Transfer of Start Lead From Transverter Connector

12c	If office is arranged for LAMA— Set A through K DIAL switches, as required to select LAMA detail billed route served by sender used in test and any test line number.	
13d	If office is arranged for ANI— Set A through K DIAL switches, as required to select ANI route and any test line number.	
14d	Operate ANI key.	
15	Operate _D key for number of digits to be dialed.	
16	Operate CL_ key, as required to select class of service for access to route of call.	
17	Operate TVR key.	

STEP	ACTION	VERIFICATION
18	At transverter connector— Insulate 13 of SD relay associated with sender used in test.	
19	At OTF— Operate ST key.	▶Call completed to test line. At TIC— TV, DR_, DNK, RD, TRS, MB_, RN_ lamps lighted. ***Note:*** It may be necessary to repeat the test to obtain proper verification, depending on whether or not the Z relay in the transverter connector is operated at the time of the test.◀
20	At OTF— Restore ST key.	Call disconnected.
21	At TIC— Momentarily operate RLS key.	All lamps extinguished.
22	At transverter connector— Remove insulator from SD relay.	
23	At OTF— Restore all keys and switches not required in next test.	
24e	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
25e	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
26a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

C. Observing Feature

12	At line link frame— Using P3BF cord, insert 351A plug into jack of line link vertical of line location associated with originating test line, and insert 464B plug into SO jack of service observing circuit.	
13	Select from office records a trunk and LAMA route used for bulk billed calls.	

STEP	ACTION	VERIFICATION
14	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
15	At OTF— Operate FS_, NT keys to select trunk used in test.	
16	Insert 329A make-busy plug into TS_ jack of trunk selected.	
17	Set A through K DIAL switches, as required to select trunk used in test and any test line number.	
18	Operate _D key for number of digits to be dialed.	
19	Operate CL_ key, as required to select class of service for access to route of call.	
20	At transverter under test— Block nonoperated P1A relay.	
21	At OTF— Operate ST key.	◗Overflow tone heard. At TIC— TV, DR_, DNK, OBS, MB_, RN_ lamps lighted. A'2, B'0, 4 lamps lighted identifying last line of an observed initial entry of four lines. C'_, D'_ lamps lighted identifying message billing index units and tens digit. E'_, F'_ lamps lighted identifying call identity index trunk number.◖
22	At OTF— Restore ST key.	Overflow tone silenced.
23	At TIC— Momentarily operate RL key.	All lamps extinguished.
24	At transverter under test— Remove blocking tool from P1A relay.	
25	At line link frame— Remove patching cord from jack of line link vertical and SO jack.	
26	At OTF— Restore all keys and switches not required in next test.	

STEP	ACTION	VERIFICATION
27	Remove make-busy plug from TS_ jack of trunk selected.	
28	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
29c	If no further tests are to be made— At OTF— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
30c	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
31a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	
D. Second Trial Feature		
12c	If office is arranged for LAMA— Set A through K DIAL switches, as required to select LAMA detail billed route served by sender used in test and any test line number.	
13d	If office is arranged for ANI— Set A through K DIAL switches to select ANI route and any test line number.	
14d	Operate ANI key.	
15	Operate _D key for number of digits to be dialed.	
16	Operate CL_ key, as required to select class of service for access to route of call.	
17	Operate TVR key.	
18	At transverter under test— Block nonoperated 1TR relay.	
19	At OTF— Operate ST key.	▶Call completed to test line. At TIC— TV, DR_, DNK, RD, TLR_, MB_, RN_ lamps lighted. CN_, S_ lamps lighted identifying transverter connector number and sender position in connector.

STEP	ACTION	VERIFICATION
		FU_, VG_, HG_, VF_ lamps lighted identifying line location of originating test line OFF_, TH_, HN_, T_, U_ lamps lighted identifying directory number of originating test line.◀
20	At OTF— Restore ST key.	Call disconnected.
21	At TIC— Momentarily operate RLS key.	All lamps extinguished.
22	At transverter under test— Remove blocking tool from 1TR relay.	
23	Block operated 2TR relay.	
24	At TIC— Operate 2TR key.	2TRG lamp lighted.
25	At OTF— Operate ST key.	▶Call completed to test line. At TIC— TV, DR_, DNK, RD, 2TR, TLR_, MB_, RN_ lamps lighted. CN_, S_ lamps lighted identifying transverter connector number and sender position in connector. FU_, VG_, HG_, VF_ lamps lighted identifying line location of originating test line. OFF_, TH_, HN_, T_, U_ lamps lighted identifying directory number of originating test line.◀
26	At OTF— Restore ST key.	Connection disconnected.
27	At TIC— Momentarily operate RLS key.	▶All lamps extinguished except 2TRG.
28	Restore 2TR key.	2TRG lamp extinguished.◀
29	At transverter under test— Remove blocking tool from 2TR relay.	
30	At OTF— Restore all keys and switches not required in next test.	
31e	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	

STEP	ACTION	VERIFICATION
32e	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
33a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

E. Recorder Make-Busy and Recorder Trouble Features

12	Select from office records a trunk and LAMA route used for bulk billed calls.	
13	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
14	At OTF— Operate FS_, NT keys to select trunk used in test.	
15	Insert 329A make-busy plug into TS_ jack of trunk selected.	
16	Set A through K DIAL switches, as required to select trunk used in test and any test line number.	
17	Operate _D key for number of digits to be dialed.	
18	Operate CL_ key, as required to select class of service for access to route of call.	
19	Operate TVR key.	
20	At jack, lamp and key circuit— Insert 322A make-busy plug into recorder MB_ jack associated with trunk made busy. ***Caution: While the recorder is made busy, all bulk billed calls will be completed free and detail billed calls will be routed to overflow.***	♦EMR♦ lamp lighted while make-busy pattern is being placed on tape.
21	At OTF— Operate ST key.	Call completed to test line. At TIC— ♦TV, DR_, DNK, RD, MB_, RN_ lamps lighted.♦

STEP	ACTION	VERIFICATION
22	At OTF— Restore ST key.	Call disconnected.
23	At TIC— Momentarily operate RLS key.	All lamps extinguished.
24	At OTF— Restore FS_, NT, _D, CL_ keys.	
25	Remove make-busy plug from TS_ jack of trunk selected.	
26	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
27	Remove make-busy plug from recorder MB_ jack associated with trunk selected.	
28	Select from office records a trunk and LAMA route used for detailed billed calls.	
29	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
30	At OTF— Operate FS_, NT keys to select trunk used in test.	
31	Insert 329A make-busy plug into TS_ jack of trunk selected.	
32	Set A through K DIAL switches, as required to select trunk used in test and any test line number.	
33	Operate _D key for number of digits to be dialed.	
34	Operate CL_ key, as required to select class of service for access to route of call.	
35	At jack, lamp and key circuit— Insert 322A make-busy plug into recorder MB_ jack associated with trunk made busy. ***Caution: While the recorder is made busy, all bulk billed calls will be completed free and detail billed calls will be routed to overflow.***	◗EMR◖ lamp lighted while make-busy pattern is being placed on tape.

STEP	ACTION	VERIFICATION
36	At OTF— Operate ST key.	Overflow tone heard. At TIC— TV, DR_, DNK, RD, MB_, RN_ lamps lighted.
37	At OTF— Restore ST key.	Overflow tone silenced.
38	At TIC— Momentarily operate RLS key.	All lamps extinguished.
39	At OTF— Remove make-busy plug from TS_ jack of trunk selected.	
40	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
41	Remove make-busy plug from recorder MB_ jack associated with trunk selected.	
42	At transverter under test— Using 893 cords, connect directory number of originating test line to trap circuit, omitting connection from OFF_ terminal to TR terminal.	
43	Using W2W cord, connect 607A or 624B tool attached to ring conductor to OFF terminal of trap circuit and insert 310 plug into SP jack.	
44	At recorder associated with trunk selected— Using W2W cord, connect 607A or 624B tool attached to ring conductor to winding terminal 12T of TBL relay and insert 310 plug into SP jack.	
45	At OTF— Operate ST key.	Overflow tone heard— At TIC— TV, DR_, DNK, MB_, RN_ lamps lighted. CN_, S_ lamps lighted identifying transverter connector number and sender position in connector. FU_, VG_, HG_, VF_ lamps lighted identifying line location of originating test line. OFF_, TH_, HN_, T_, U_ lamps lighted identifying directory number of originating test line.
46	At OTF— Restore ST key.	Overflow tone silenced.

STEP	ACTION	VERIFICATION
47	At TIC— Momentarily operate RLS key.	All lamps extinguished.
48	At recorder associated with trunk selected— Remove testing cord from TBL relay and SP jack.	
49	At transverter under test— Remove testing cord from OFF_ terminal and SP jack.	
50	Remove testing cords from trap circuit.	
51	At OTF— Restore all keys and switches not required in next test.	
52	Remove make-busy plug from TS_ jack of trunk selected.	
53	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
54c	If no further tests are to be made— At OTF— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
55c	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
56a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

F. Translator Make-Busy Feature

12c	If office is arranged for LAMA— Set A through K DIAL switches, as required to select LAMA bulk billed route and any test line number.	
13d	If office is arranged for ANI— Set A through K DIAL switches, as required to select ANI route and any test line number.	
14d	Operate ANI key.	

STEP	ACTION	VERIFICATION
15	Operate _D key for number of digits to be dialed.	
16	Operate CL_ key, as required to select class of service for access to route of call.	
17	Operate TVR key.	
18	At jack, lamp, and key circuit— Insert 322A make-busy plug into translator AMAT-MB_ or TRNSL-MB_ jack associated with originating test line. ***Caution: While the translator is made busy, all bulk billed calls will be completed free and detailed billed calls will be routed to overflow. All ANI calls will require operator identification.***	
19	At OTF— Operate ST key. ***Note:*** If test call is completed to an operator, inform operator that this is a test call and proceed to next step.	If LAMA transverter is under test— Call completed to test line. If ANI transverter is under test— Call completed to operator for calling line number identification. ♦At TIC— TV, DR_, DNK, RD, MB_, RN_ lamps lighted. TLR_ lamp ***not*** lighted. Call disconnected.♦
20	A OTF— Restore ST key.	
21	At TIC— Momentarily operate RLS key.	All lamps extinguished.
22	At jack, lamp, and key circuit— Remove make-busy plug from translator AMAT-MB_ or TRNSL-MB_ jack associated with originating test line.	
23	Restore _D, CL_ keys.	
24c	If office is arranged for LAMA— Set A through K DIAL switches, as required to select LAMA detailed billed route and any test number.	
25c	Operate _D key for number of digits to be dialed.	
26c	Operate CL_ key, as required to select class of service for access to route of call.	

STEP	ACTION	VERIFICATION
27c	At jack, lamp, and key circuit— Insert 322A make-busy plug into translator AMAT-MB_ or TRNSL-MB_ jack associated with originating test line. ***Caution: While the translator is made busy, all bulk billed calls will be completed free and detail billed calls will be routed to overflow.***	
28c	At OTF— Operate ST key.	◗Overflow tone heard. At TIC— TV, DR_, DNK, RD, MB_, RN_ lamps lighted. TLR_ lamp ***not*** lighted.◖
29c	At OTF— Restore ST key.	Overflow tone silenced.
30c	At TIC— Momentarily operate RLS key.	All lamps extinguished.
31c	At jack, lamp, and key circuit— Remove make-busy plug from AMAT-MB_ or TRNSL-MB_ jack associated with originating test line.	
32	At OTF— Restore all keys and switches not required in next test.	
33e	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
34e	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
35a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

G. Translator Double-Connection Feature

12c	If office is arranged for LAMA— Set A through K DIAL switches, as required to select LAMA detailed billed route and any test line number.	

STEP	ACTION	VERIFICATION
13d	If office is arranged for ANI— Set A through K DIAL switches, as required to select ANI route and any test line number.	
14d	Operate ANI key.	
15d	Operate _D key for number of digits to be dialed.	
16	Operate CL_ key as required to select class of service for access to route of call.	
17	Operate TVR key.	
18	At transverter under test— Determine which TS_ relay will operate for originating test line.	
19	Using 893 testing cord, connect SC_ terminal associated with TS_ relay selected to SC_ terminal associated with any other TS_ relay on auxiliary transverter unit terminal strip. ***Caution: While the strap is placed in Step 19, all AMA calls associated with TS_ relays crossed will be completed free or routed to overflow. All ANI customers will need the assistance of an operator.***	
20	At OTF— Operate ST key.	♦Overflow tone heard. At TIC— TV, DR_ lamps lighted. DNK lamp ***not*** lighted.♦
21	At OTF— Restore ST key.	Overflow tone silenced.
22	At TIC— Momentarily operate RLS key.	All lamps extinguished.
23	At transverter under test— Remove testing cord from SC_ terminals on auxiliary transverter unit terminal strip.	
24	At OTF— Restore all keys and switches not required in next test.	
25e	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	

STEP	ACTION	VERIFICATION
26e	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
27a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	
	H. AMA Translator Selection and Directory Number Register Relays	
7	Determine from office records line location and corresponding directory number for a line in each vertical group associated with each translator. Select these lines, and additional lines if necessary, so that the line directory numbers include each of numerals 0 through 9 in each office, thousands, hundreds, tens, and units digits for which each translator is wired.	
8	At OTF— Operate OTLP, TVR keys.	
9b	If tip translator is to be selected— Operate TP key.	
10	Set A through K DIAL switches, as required to select LAMA route and any test line number.	
11	Operate _D key for number of digits to be dialed.	
12	Operate CL_ key, as required to select class of service for access to route of call.	
13	At jack, lamp, and key circuit— Using P3E patching cord, insert 310 plugs into SP and OTL jacks.	
14	At line link frame— Using P3U patching cord, insert 351A plug into line link vertical of line location associated with selected translator and insert 310 plug into SP jack.	
15	At OTF— Operate ST key.	▶Call completed to test line. At TIC— TV, DR_, DNK, RD, TLR_, MB_, RN_ lamps lighted.

STEP	ACTION	VERIFICATION
		FU_, VG_, HG_, VF_ lamps lighted identifying line location associated with selected translator.
16	At OTF— Restore ST key.	Call disconnected.
17	At TIC— Momentarily operate RLS key.	All lamps extinguished.
18	At line link frame— Remove patching cord from SP jack and line link vertical.	
19	Repeat Steps 9b through 18 for each vertical group for each translator.	
20	At OTF— Restore all keys and switches not required in next test.	
21	At jack, lamp, and key circuit— Remove patching cord from SP and OTL jacks.	
22a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

I. ANI Translator Selection and Directory Number Register Relays

7	Determine from office records line location and corresponding directory number for a line in each vertical group associated with each translator. Select these lines, and additional lines if necessary, so that the line directory numbers include each of the numerals 0 through 9 in each office, thousands, hundreds, tens, and units digits for which each translator is wired.	
8	At OTF— Operate OTLP, TVR keys.	
9	Operate ANI, OGT, NCH keys.	
10	Set A through K DIAL switches, as required to select ANI route and any test number.	
11	Operate _D key for number of digits to be dialed.	

STEP	ACTION	VERIFICATION
12	Operate CL_ key, as required to select class of service for access to route of call.	
13	Set A SDR switch for identifying digit and set B through K SDR switches as required for ***calling*** line number.	
14	Operate _SD key for number of digits outpulsed by sender.	
15c	If MF sender is used— Operate MFS key.	
16	Select from office records a trunk used for ANI calls.	
17	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
18	At OTF— Operate FS_, NT keys to select trunk used in test.	
19	Insert 329A make-busy plug into TS_ jack of trunk selected.	
20	At jack, lamp, and key circuit— Using P3E patching cord, insert 310 plugs into SP and OTL jacks.	
21	At line link frame— Using P3U patching cord, insert 351A plug into line link vertical of line location associated with selected translator and insert 310 plug into SP jack.	
22	At OTF— Operate ST key.	At TIC— OS, EP lamps lighted. CS lamp lighted indicating number outpulsed by sender matched the number set up on the SDR switches. ***Note:*** If the line number set up on the SDR switch does not match with the translation of the translator, the call will block. The failure may be identified by checking the ♦A/1 through K/0 lamps (OTF).♦
23	At OTF— Restore ST key.	

STEP	ACTION	VERIFICATION
24	At TIC— Momentarily operate RLS key.	All lamps extinguished.
25	At line link frame— Remove patching cord from SP jack and line link vertical.	
26	At OTF— Remove make-busy plug from TS_ jack of trunk selected.	
27	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
28	Repeat Steps 10 through 27 for each vertical group of each translator.	
29	At OTF— Restore all keys and switches not required in next test.	
30	At jack, lamp, and key circuit— Remove patching cord from SP and OTL jacks.	
31a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

J. Information Code—Home Area (411) and Foreign Area (NPA 411)

12	Select from office records a trunk and route used for home area information code 411.	
13	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
14	At OTF— Insert 329A make-busy plug into TS_ jack of trunk selected.	
15	Operate FS_, NT keys to select trunk used in test.	
16	Set A through C DIAL switches to select home area information code 411.	
17	Operate 3D key.	

STEP	ACTION	VERIFICATION
18	At transverter under test— Block nonoperated P3A relay.	
19	At OTF— Operate ST key.	▶Overflow tone heard. At TIC— TV, DR_, DNK, CI4, CI3, MB_, RN_ lamps lighted. A'0 lamp lighted identifying supplementary line. B'_ lamp lighted identifying home area index. C'_ lamp lighted identifying category of class of call index. D'0, 4; E'0, 1; F'0, 1 lamps lighted identifying called office code.◀
20	At OTF— Restore ST key.	Overflow tone silenced.
21	At TIC— Momentarily operate RLS key.	All lamps extinguished.
22	At transverter under test— Remove blocking tool from P3A relay.	
23	Block nonoperated P1A relay.	
24	At OTF— Momentarily operate ST key.	▶Overflow tone heard. At TIC— TV, DR_, DNK, CI4, CI3, CI2, CI1, RN_ lamps lighted. A'2, B'1, 2 lamps lighted identifying last line of nonobserved 4-line initial entry. C'_, D'_ lamps lighted identifying message billing index units and tens digits. E'_, F'_ lamps lighted identifying call identity index trunk number.◀
25	At OTF— Restore ST key.	Overflow tone silenced.
26	At TIC— Momentarily operate RLS key.	All lamps extinguished.
27	At transverter under test— Remove blocking tool from P1A relay.	
28	At OTF— Restore FS_, NT, 3D keys.	
29	Remove 329A make-busy plug from TS_ jack of trunk selected.	

STEP	ACTION	VERIFICATION
30	At jack, lamp, and key circuit— Remove 322A make-busy plug from MB_ jack of trunk selected.	
31	Select from office records a trunk and route used for foreign area information code NPA 411.	
32	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
33	At OTF— Insert 329A make-busy plug into TS_ jack of trunk selected.	
34	Operate FS_, NT keys to select trunk used in test.	
35	Set A through F DIAL switches to select foreign area information code NPA 411.	
36	Operate 6D key.	
37	At transverter under test— Block nonoperated P3A relay.	
38	At OTF— Operate ST key.	◗Overflow tone heard. At TIC— TV, DR_, DNK, CI4, CI3, MB_, RN_ lamps lighted. A'0 lamp lighted identifying supplementary line. B'_ lamp lighted identifying home area index. C'_ lamp lighted identifying category of class of call index. D'0, 4; E'0, 1; F'0, 1 lamps lighted identifying ***called*** office code.◖
39	At OTF— Restore ST key.	Overflow tone silenced.
40	At TIC— Momentarily operate RLS key.	All lamps extinguished.
41	At transverter under test— Remove blocking tool from P3A relay.	
42	Block nonoperated PFAA relay.	
43	At OTF— Operate ST key.	◗Overflow tone heard. At TIC—

STEP	ACTION	VERIFICATION
		TV, DR_, DNK, CIFA, CI4, CI3, MB_, RN_ lamps lighted. A'0 lamp lighted identifying supplementary line. B'4, 7; C'4, 7 lamps lighted identifying filler digits. D'_ through F'_ lamps lighted identifying foreign area code.
44	At OTF— Restore ST key.	Overflow tone silenced.
45	At TIC— Momentarily operate RLS key.	All lamps extinguished.
46	At transverter under test— Remove blocking tool from PFAA relay.	
47	Block nonoperated P1A relay.	
48	At OTF— Momentarily operate ST key.	Overflow tone heard. At TIC— TV, DR_, DNK, CIFA, CI4, CI3, CI2, CI1, RN_ lamps lighted. A'2, B1, 4 lamps lighted identifying last line of nonobserved 5-line initial entry. E'_, F'_ lamps lighted identifying call identity index trunk number.
49	At OTF— Restore ST key.	Overflow tone silenced.
50	At TIC— Momentarily operate RLS key.	All lamps extinguished.
51	At transverter under test— Remove blocking tool from P1A relay.	
52	At OTF— Restore all keys and switches not required in next test.	
53	Remove make-busy plug from TS_ jack of trunk selected.	
54	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
55c	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	

STEP	ACTION	VERIFICATION
56c	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
57a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	

K. Forced Four-Line Entry

12	Select from office records a trunk and LAMA route used for bulk billed (two-line entry) calls.	
13	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
14	At OTF— Operate FS_, NT keys to select trunk used in test.	
15	Insert 329A make-busy plug into TS_ jack of trunk selected.	
16	Set A through K DIAL switches, as required to select trunk used in test and any test line number.	
17	Operate _D key for number of digits to be dialed.	
18	Operate CL_ key, as required to select class of service for access to route of call.	
19	Set A through G SDR switches, as required for digits to be outpulsed by sender.	
20	Operate OGT, NCH keys.	
21	Operate _SD key for number of digits outpulsed by sender.	
22c	If sender used with selected trunk is arranged for dial pulsing— Operate DPS key.	
23d	If sender used with selected trunk is arranged for multifrequency pulsing— Operate MFS key.	

STEP	ACTION	VERIFICATION
24e	If sender used with selected trunk requires wink start— Operate WK key.	
25f	If sender used with selected trunk requires immediate start of pulsing— Operate CL2S key.	
26	At jack, lamp, and key circuit— Operate MDLC key.	When all transverters serving calls at time MDLC key is operated have released— MUD lamp lighted.
27	At transverter under test— Block nonoperated TVT, TVTA relays.	
28	At AMA perforator— Using red china marking pencil, mark AMA tape at input chute of perforator associated with trunk made busy.	Call completed to test line.
29	At OTF— Operate ST key.	Connection released.
30	Restore ST key.	▶4-line initial entry perforated. ***First line*** A0 digit indicates supplementary line. B_, C_, D_, E_ digits indicate numericals of ***called*** number. F_ digit indicates class of call index. ***Second line*** A0 digit indicates supplementary line. B_ digit indicates home area index or compressed code, representing a foreign area code. C_ digit indicates category of class of call index. D_, E_, F_ digits indicate ***called*** office code. ***Third line*** A0 digit indicates supplementary line. B_ digit indicates ***calling*** office index. C_ through F_ digits indicate numericals of ***calling*** number. ***Fourth line*** A2, B_ digits indicate last line of observed or nonobserved 4-line initial entry. C_, D_ digits indicate message billing index units and tens digits. E_, F_ digits indicate call identity index trunk number.◀
31	At transverter under test— Remove blocking tools from TVT, TVTA relays.	

STEP	ACTION	VERIFICATION
32	At OTF— Restore all keys and switches not required in next test.	
33	Remove make-busy plug from TS_ jack of trunk selected.	
34	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack of trunk selected.	
35g	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field and MB_ jack of sender selected.	
36g	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
37a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	
L. ▶Directory Assistance Charging		
12	Select from office records a trunk and route used for local information code 411.	
13	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
14	At OTF— Insert 329A make-busy plug into TS_ jack of trunk selected.	
15	Operate FS_, NT keys to select trunk used in test.	
16	Set A through C DIAL switches to select local information code 411.	
17	Operate 3D key.	
18	At transverter under test— Block nonoperated P2A relay.	
19	At OTF— Operate ST key.	Overflow tone heard. At TIC— TV, DR_, DNK, CI2, MB2, 4; RN_ lamps lighted.

STEP	ACTION	VERIFICATION
		A'0 lamp lighted identifying supplementary line. B'_ lamp lighted identifying ***calling*** office index. C'_ through F'_ lamps lighted identifying numericals of ***calling*** number.
20	At OTF— Restore ST key.	Overflow tone silenced.
21	At TIC— Momentarily operate RLS key.	All lamps extinguished.
22	At transverter under test— Remove blocking tool from P2A relay.	
23	Block nonoperated PIA relay.	
24	At OTF— Operate ST key.	Overflow tone heard. At TIC— TV, DR_, DNK, CI2, CI1, MB2, 4; RN_ lamps lighted. A'0, B'0, 1 lamps lighted identifying last line of nonobserved 2-line initial entry. C'2, 4; D'0, 1 lamps lighted identifying message billing index units and tens digits. E'_, F'_ lamps lighted identifying call identity index trunk number.
25	At OTF— Restore ST key.	Overflow tone silenced.
26	At TIC— Momentarily operate RLS key.	All lamps extinguished.
27	At transverter under test— Remove blocking tool from P1A relay.	
28	At OTF— Restore FS_, NT, 3D keys.	
29	Remove 329A make-busy plug from TS_ jack of trunk selected.	
30	At jack, lamp, and key circuit— Remove 322A make-busy plug from MB_ jack of trunk selected.	
31	Select from office records a trunk and route used for home NPA information code 555-1212.	

STEP	ACTION	VERIFICATION
32	At jack, lamp, and key circuit— Insert 322A make-busy plug into MB_ jack of trunk selected.	
33	At OTF— Insert 329A make-busy plug into TS_ jack of trunk selected.	
34	Operate FS_, NT keys to select trunk used in test.	
35	Set A through G DIAL switches as required, to select home NPA information code 555-1212.	
36	Operate 7D key.	
37	Repeat Steps 19 through 27.	
38	At OTF— Restore all keys and switches not required in next test.	
39	Remove 329A make-busy plug from TS_ jack of trunk selected.	
40	At jack, lamp, and key circuit— Remove 322A make-busy plug from MB_ jack of trunk selected.	
41c	If no further tests are to be made— Remove patching cord from SDR jack in MB2 jack field ad MB_ jack of sender selected.	
42c	Remove patching cords from 0 to 9 jacks in MB1 jack field and MB_ jacks of all other senders in same group.	
43a	If more than one transverter is provided— At jack, lamp, and key circuit— Remove make-busy plug from TVMB_ jack of transverter under test.	