AMA TRANSLATOR
TESTS
USING LINE VERIFICATION
TEST CIRCUIT SD-27154-01
NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing AMA translator cross-connections in No. 1 Crossbar offices using the line verification test circuit SD-27154-01.

1.02 This issue affects the Equipment Test List.

1.03 The tests covered are:

1.04 Test A will generate a complete list of all equipped line location—directory number

assignments. This test would particularly be made to verify pre-cutover cross-connections.

1.05 At any time during the individual test, operation of the LP lamp key will facilitate a progress check of the test circuit.

1.06 Test A, B, or C will cause the TNM register to score once for each number trap or line verification. The reading of this register will provide maintenance personnel with the number of trouble entries to expect.

1.07 Test A, B, or C which encounters a maintenance recorder plugged busy will cause the test circuit to lock in a lamp display of the line location along with the MRB lamp, and an audible alarm from the alarm circuit. The AR key releases the alarm and the lamp display. The make-busy plug must be removed before performing these tests.

1.08 The maintenance recorder tape generated by Test A, B, or C may be translated to a printed list with the use of the maintennace reader and printer circuit.

1.09 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 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 step 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.

2. APPARATUS

All Tests

2.01 AMA translator line verification test circuit SD-27154-01.

3. PREPARATION

Test A

3.01 Obtain from office records the line equipment numbers and associated directory or billing number of all lines associated with the translators under test.

Tests B, C, D, and E

3.02 Obtain from office records the line equipment numbers and associated directory or billing number of the particular line(s) under test.

Tests A, B, and D

3.03 Obtain from office records the highest numbered equipped column for the marker group under test in order to determine the setting of the LCH, LCT, and LCU switches.

4. METHOD

STEP	ACTION	VERIFICATION
A.	**Verification Tests of All Line Locations—Using Maintenance Recorder**	
1	Set all NM- switches designated OFF, TH, H, T, and U to OFF.	
2	Operate proper MG- key.	
3	Set LCH, LCT, and LCU switches to agree with size of office served by marker group.	
4a	If tip party lines are to be tested— Operate TP key.	
5	Operate LV key.	

STEP	ACTION	VERIFICATION
6	Momentarily operate ST key. ***Note:*** If testing is to start at line location other then 00000, perform Steps 5 through 10 of Test C before operating ST key.	Trouble record taken at maintenance recorder of each equipped line location in office. ET lamp lighted. Minor alarm sounds.
7b	If test circuit is to be stopped before end of test cycle— Operate STP key.	Test circuit stopped.
8b	Release STP key.	Test circuit resumes testing. ET lamp lighted. Minor alarm sounds.
9	Momentarily operate AR key.	ET lamp extinguished. Minor alarm silenced.
10	Restore all keys and switches to normal.	

B. Verification Test of Desired Lines—Using Maintenance Recorder

1	Set up directory numbers on NM- switches designated OFF, TH, H, T, and U. ***Note:*** One to five directory numbers, or ten with options Z, may be set up on NM-switches. Unused switches must be set to OFF.	
2	Operate proper MG- key.	
3	Set LCH, LCT, LCU switches to agree with size of office served by marker group.	
4a	If tip party lines are to be tested— Operate TP key.	
5	Momentarily operate ST key.	Maintenance recorder takes trouble record each time test circuit tests line location which matches one of directory numbers set up in Step 1. ET lamp lighted. Minor alarm sounds.
6b	If test circuit is to be stopped before end of test cycle— Operat STP key.	Test circuit stopped.
7b	Release STP key.	Test circuit resumes testing. ET lamp lighted. Minor alarm sounds.

STEP	ACTION	VERIFICATION
8	Momentarily operate AR key.	ET lamp extinguished. Minor alarm silenced.
9	Restore all keys and switches to normal.	

C. Verification Test of Single Line—Using Maintenance Recorder

1	Set first NM- switches designated OFF, TH, H, T, and U to desired number.	
2	Set all other NM- switches to OFF position.	
3	Operate proper MG- key.	
4a	If line to be tested is tip party— Operate TP key.	
5	Operate MSC key.	
6	Operate and release VFS key until VF- lamps indicate desired file. ***Note:*** If TP key is operated, it will require two operations of VFS key for each file advance.	Proper VF- lamps lighted.
7	Operate and release CHS key until CH- lamps indicate desired column hundreds.	Proper CH- lamps lighted.
8	Operate and release CTS key until CT- lamps indicate desired column tens.	Proper CT- lamps lighted.
9	Operate and release CUS key until CU- lamps indicate desired column units.	Proper CU- lamps lighted.
10	Operate and release SWS key until SW- lamps indicate desired switch.	Proper SW- lamps lighted.
11	Operate STP key.	
12	Release MSC key.	Trouble record taken at maintenance recorder. Test circuit stopped.
13b	If line is to be retested— Momentarily operate RT key.	Trouble record taken at maintenance recorder. Test circuit stopped.
14	Momentarily operate RL key.	All lamps except ET extinguished. Minor alarm sounds.
15	Momentarily operate AR key.	Minor alarm silenced. ET lamp extinguished.

STEP	ACTION	VERIFICATION
16	Restore all keys and switches to normal.	
D.	**Verification Test of Desired Lines—Without Maintenance Recorder**	
1	Operate NTR key.	
2	Perform Steps 1 through 4a of Test B.	
3	Momentarily operate ST key.	When a match occurs, test circuit stopped. ON and NT lamps lighted. CH-, CT-, CU-, SW-, VF-, NM- lamps corresponding to trapped directory number lighted. Minor alarm sounds.
4	Momentarily operate RST key.	All lamps extinguished. Minor alarm silenced. Test circuit resumes testing until next number match occurs. Then lamps lighted as in Step 3.
5a	If test circuit is to be stopped before end of test cycle— Operate STP key.	Test circuit stopped.
6a	Release STP key.	Test circuit resumes testing. ET lamp lighted. Minor alarm sounds.
7	Repeat Step 4 for each number set on NM-switches, noting if multiple matches occur for a single number.	ET lamp lighted. Minor alarm sounds.
8	Momentarily operate AR key.	Minor alarm silenced.
9	Restore all keys and switches to normal.	All lamps extinguished.
E.	**Verification Test of Single Line—Without Maintenance Recorder**	
1	Operate NTR key.	
2	Perform Steps 1 through 11 of Test C.	
3	Release MSC key.	When a match occurs— Test circuit stopped. ON and NT lamp lighted. CH-, CT-, CU-, SW-, VF-, NM- lamps corresponding to trapped directory number lighted. Minor alarm sounds.

STEP	ACTION	VERIFICATION
4a	If line is to be retested— Momentarily operate RT key.	Same as Step 3.
5	Momentarily operate RL key.	All lamps except ET extinguished.
6	Momentarily operate AR key.	Minor alarm silenced. ET lamp extinguished.
7	Restore all keys and switches to normal.	

5. INTERPRETATION OF SWITCH, KEY, AND LAMP DESIGNATIONS

5.01 SWITCHES

SWITCH	PURPOSE
OFF	Office, directory number
TH	Thousands, directory number
HN	Hundreds, directory number
T	Tens, directory number
U	Units, directory number
LCH	Last column hundreds
LCT	Last column tens
LCU	Last column units

5.02 KEYS

KEY	PURPOSE
AR	***Alarm Release:*** To release visual and audible alarms.
CHS	***Column Hundreds Step:*** To advance column hundreds during preselection of an individual line location.
CTS	***Column Tens Step:*** To advance column tens during preselection of an individual line location.
CUS	***Column Units Step:*** To advance column units during preselection of an individual line location.
LP	***Lamp:*** To provide a lamp display showing the progress of the test.
LV	***Line Verification:*** To demand a trouble recorder record of every equipped line location.
MG-0	***Marker Group 0:*** To indicate that lines in marker group 0 are to be tested.
MG-1	***Marker Group 1:*** To indicate that lines in marker group 1 are to be tested.
MSC	***Manual Set Control:*** To permit preselection of an individual line location.
NTR	***No Trouble Record:*** To prevent the trouble recorder from perforating an entry on an individual line verification.
RL	***Release:*** To restore the test circuit to normal.
RT	***Retest:*** To recycle the test circuit on the same line location.
RST	***Restart:*** To restart the test circuit after having locked in a lamp display on the test circuit lamps.
ST	***Start:*** To start the test circuit.
STP	***Stop:*** To manually stop the test circuit.

SWS	***Switch Set:*** To advance the switch setting during preselection of an individual line selection.
TP	***Tip Party:*** To test tip parties.
VFS	***Vertical File Set:*** To advance vertical file during preselection of an individual line selection.

5.03 LAMPS

LAMP	**INDICATION**
CH-	***Column Hundreds:*** Indicates the column hundreds digit of the line location which is being passed to the transverter by the test circuit.
CT-	***Column Tens:*** Indicates the column tens digit of the line location which is being passed to the transverter by the test circuit.
CU-	***Column Units:*** Indicates the column units digit of the line location which is being passed to the transverter by the test circuit.
ET	***End of Test:*** Test circuit has completed a normal test cycle.
LC	***Last Column:*** Last column is being tested.
LV	***Line Verification:*** Line verification test was made but no trouble record could be made.
MBA	***Make-Busy Auxiliary:*** Transverter has been seized by the test circuit.
MRB	***Maintenance Recorder Busy:*** The test encountered the maintenance recorder plugged busy.
NM-	***Number Match:*** The translator has translated the line location into a directory number which matches the number set on the indicated NM- switches.
NT	***Number Trapped:*** A number match has been made with a maintenance recorder unavailable. The trapped number is displayed on NM- lamps and the corresponding line location is displayed on the CH-, CT-, CU-, VF-, and SW- lamps.
ON	***OFF Normal:*** The test circuit has started but has not completed a test cycle.
RP	***Ring Party:*** Ring party lines are being tested.
SW-	***Switch:*** Indicates the switch of the line location which is being passed to the transverter by the test circuit.
TP	***Tip Party:*** Tip party lines are being tested.
VF-	***Vertical File:*** Indicate the vertical file of the line location which is being passed to the transverter by the test circuit.