Installation Engineering Handbook 62
Western Electric Company, Incorporated
Columbus Works

Section 253
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TEST OF AUTOMATIC INTERCEPT SERVICE MULTIFREQUENCY OUTGOING SENDER CIRCUIT USING THE OUTGOING TRUNK TEST FRAME

CONTENTS

1. GENERAL INFORMATION

1.1 Description of Test: This method describes test of the Multifrequency Outgoing Sender (SD-27962-01) used for Automatic Intercept Service without line link pulsing. In addition, the leads connecting the Interrupter Circuit (SD-25062-01) and the MF Current Supply (SD-95391-01) to the MF Outgoing Sender are tested. The tests are performed using the OGTTF (Outgoing Trunk Test Frame SD-25177-01).

1.2 This test should be applied at least once to each AIS Multifrequency Outgoing Sender.

1.3 Tests of Handbook 62, Section 252, and applicable tests of Section 225.4 should be performed before the following tests.

1.4 The OGTT can be arranged to test AIS without LLP in a maximum of 4 Terminating Marker Groups. The Sender Select and Trunk Select switches are designated 0 and 1 (2 MKR GRPS) or 0/2 and 1/3 (4 MKR GRPS). To test in the third marker group (MG2), operate switches 0/2 and key MG2. To test in the fourth marker group (MG3), operate switches 1/3 and key MG3. With key MG2/MG3 normal, the switches will access marker groups 0 or 1.

2. RECORDS AND REQUIREMENTS

2.1 Records: Forms SD-4-1313 and SD-4-1315 are required for recording the results of these tests.

2.2 Requirements: The tests of this section must be applied to meet the equipment performance requirements per BSP 816-007-181.

3. TEST EQUIPMENT

3.1 Test Sets and Accessories

Amt.	Code	Description	With ITE
As Req.	KS-16887L1 or 768A	Blocking Wedge	4023
1	R-3314	Stop Watch	4023
1	ITE-4287	Crossbar Terminating Set	

3.2 Test Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9447	6'	1	Alligator Clip	ITE-4085 Clip	4023
1	9598	12'	2	310 Plug	310 Plug	4023
1	9354	12'	2	Hubbell Polarized Plug	Hubbell 7464 Connector Body	
2	9314	12'	3	310 Plug	3-ITE-4085 Push On Clips	

4. PREPARATION

4.1 Determine intercept numbers for each class of intercept (0, 1 and 3) from the local Telephone Company Records.

4.2 At the OGTTF restore all keys and switches to their normal positions. Momentarily operate keys DISC1, DISC2 and LT-DISC.

4.3 Select the Multifrequency Outgoing Sender *with the sender select switch (see Paragraph 1.4). If the sender is available* for test, lamp SS- will not be lighted.

4.4 Select the line circuit with the trunk *select switch (see Paragraph 1.4).* If the line circuit is available for test, its RMB- lamp will not be lighted.

4.5 Set up ITE-4287 (Crossbar Terminating Set) near the AIS Frame. Using cord ITE-9354 or equivalent, connect 110V receptacle to 110 volt AC supply. Using cord ITE-9598, connect jack A of test set to Miscellaneous Circuit Jack A on AIS Frame. Lamp PWR lights.

4.6 Loop Supervision Line Circuits

4.61 Using a ITE-9314 cord, connect tip and ring of jack T to T1 and R1 terminals of line circuit under test, Terminal Strip (L).

4.62 Operate test set keys MG, LP, MFP and REV.

4.7 E and M Line Circuits

4.71 Using ITE-9314 cords, connect tip and ring of jack S to line circuits E and M terminals, respectively, Terminal Strip (L). Connect tip and ring of jack T to line circuits T1 and R1 terminals, Terminal Strip (L).

4.72 Operate test set keys CX, MG, MFP and REV.

5. REGULAR CALL

5.1 Apply Steps 1 to 5 of Table A to each intercept number determined in Paragraph 4.1.

NOTE: If the tests of this section fail and test set timing is suspected of being at fault, perform timing test on ITE-4287 in Handbook 62, Section 254, Paragraph 5.

6. OVERFLOW

6.1 Set up a Class 1 call on the numerical recording keys. Operate key CTR. Apply Steps 2 and 3 of Table A.

6.2 Momentarily operate key LT-ST. Monitor call via the telephone circuit. Verify the sender times out and SS- lamp starts flashing. Overflow tone is heard via the telephone circuit.

6.3 Release key PUI and CTR. Momentarily operate key LT-DISC. Verify all lamps extinguished.

6.4 Set up a class 3 intercept number on the numerical recording keys. Using an ITE-9447 Cord connect ground from the ground terminal of the Sender Test Circuit to 8 fixed of the SD relay in the MF Outgoing Sender under test.

6.5 Apply Steps 2 and 3 of Table A.

6.6 Momentarily operate key LT-ST. Verify overflow tone is heard via the telephone circuit.

6.7 Remove ground from 8 fixed of the SD relay. Release key RI. Momentarily operate key LT-DISC. Verify all lamps extinguished.

7. SENDER TIMING

7.1 Trunk Test

7.11 Set up a class 0 intercept number on the numerical recording keys. Apply Steps 6 to 13 of Table A.

7.12 Repeat Paragraph 7.11 for a class 1 and a class 3 intercept number.

7.2 Start Dial Signal

7.21 Set up a class 0 intercept number on the numerical recording keys. Apply Steps 14 to 16 of Table A.

7.22 Repeat Paragraph 7.21 for a class 1 and a class 3 intercept number.

7.3 Sender Functions

7.31 Set up a class 0 intercept number on the numerical recording keys. Apply Steps 17 to 19 of Table A.

7.32 Repeat Paragraph 7.31 for a class 1 and a class 3 intercept number.

8. NO DIGIT CALL

8.1 Set up a intercept number on the numerical recording keys. Operate key ND and apply Steps 2 to 4 of Table A. Verify lamps SS- and RMB- light and relay EP is operated in the MF Outgoing Sender.

8.2 Restore all keys and switches to their normal positions and momentarily operate key LT-DISC. Verify all lamps extinguished.

9. CALL THROUGH TEST

NOTE: Test performed if AIS Frame is cut through to the AIC.

9.1 Repeat Paragraphs 4.1 to 4.4.

9.2 Apply Steps 1 to 4, Table A, to each number determined in Paragraph 4.1. Monitor the call via the telephone circuit. Verify ringing and call completion to recorded message at the Intercept Center.

9.3 Apply Step 5, Table A.

Lines presented in Script indicate new or changed information.

ATTACHMENT
Table A on Pages 4 & 5.

Manager, Product Engineering
Control Center

Reason for Reissue:
To add Paragraph 1.4 and reference in Paragraphs 4.2 and 4.3.

TABLE A

STEP	FUNCTION	OPERATION	RESULT
1	Regular Call	Set up Intercept number on numerical recording keys.	
*2		Operate keys MV, DM, TAC, and VM-TLK.	
*2A		Operate keys MV, LT-MF, TAC, VM-TLK and MF1.	
3		On Class 0 and 3 calls operate key RI. On Class 1 calls operate key PUI.	
4		Momentarily operate key LT-ST. NOTE: For a Class 1 call, after number outpulsed from OGTTF, operate key SUP until lamp RT lights, then release key SUP.	Verify test set ITE-4287 is seized by line circuit, lamps ON and BY light. Sender outpulses digits into test set and lamp OFHK lights after digits outpulsing and test set timing finished.
5		Release key RI or PUI. Momentarily operate key LT-DISC.	All lamps extinguished.
6	Trunk Test Timing	Block normal relay TG1. Operate key CTR. Repeat Steps 1 to 4.	SS- lamp starts flashing in 9.8 to 11.5 seconds for a Class 0 or 3 call and in 11.4 to 13.5 seconds for a Class 1 call. Overflow is heard via telephone circuit.
7		Operate key SS-.	Lamps NSD and RVT light.
8		Release key CTR. Release key RI or PUI. Momentarily operate key LT-DISC.	All lamps extinguished.
9		Repeat Steps 1 to 4.	SS- lamp extinguished in 9.8 to 11.5 seconds for a Class 0 or 3 call and in 11.4 to 13.5 seconds for a Class 1 call. Overflow if heard via telephone circuit.
10		Release relay TG1. Release key RI or PUI. Momentarily operate key LT-DISC.	All lamps extinguished.
11		Block normal relay SB. Operate key CTR. Repeat Steps 1 to 4.	SS- lamp starts flashing after call is outpulsed for all classes of intercept. Overlfow is heard via the telephone circuit.
12		Operate key SS-.	Lamps TGF and NSD light.
13		Release relay SB. Release key RI or PUI and key CTR. Momentarily operate key LT-DISC.	All lamps extinguished.
14	Start Dial Signal	Block normal relay SD. Operate key CTR. Repeat Steps 1 to 4.	SS- lamp starts flashing in 18.3 to 21.6 seconds for a Class 0 or 3 call and in 19.9 to 23.6 seconds for a Class 1 call. Overflow is heard via the telephone circuit.

TABLE A (Cont'd.)

STEP	FUNCTION	OPERATION	RESULT
15		Operate key SS-.	Lamp NSD lights.
16		Release relay SD. Release key RI or PUI and key CTR. Momentarily operate key LT-DISC.	All lamps extinguished.
17	Sender Functions	Block normal relay EP. Operate key CTR. Repeat Steps 1 to 4.	Sender will time out and SS- lamp will start flashing. Overflow is heard via the telephone circuit.
18		Operate key SS-.	Lamp NDK lights.
19		Release relay EP. Release key RI or PUI and key CTR. Momentarily operate key LT-DISC.	All lamps extinguished.

* If OGTT Frame is equipped with key LT-MF, perform tests using Step 2 and then using Step 2A.