Installation Engineering Handbook 62
Western Electric Company, Incorporated
Columbus Works

Section 252
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TEST OF THE AIS MULTIFREQUENCY OUTGOING SENDER AND THE AIS SENDER TEST CIRCUIT WITHOUT LLP

CONTENTS

1. GENERAL INFORMATION
2. RECORDS AND REQUIREMENTS
3. TEST EQUIPMENT
4. PREPARATION
5. REGULAR CALL
6. SENDER TIMING
7. DIGIT MISMATCH
8. ALL TRUNKS BUSY
9. CONTROL CIRCUIT SEIZURE
10. STUCK SENDER ALARM
11. TROUBLE NUMBER FREQUENCIES

1. GENERAL INFORMATION

1.1 Description of Tests: This method describes tests of the Multifrequency Outgoing Sender (SD-27962-01) and the Automatic Intercept Service Sender Test Circuit (SD-27965-01) without line link pulsing.

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

1.3 AIS Sender Test Circuit lamp indications not tested here are tested in connection with tests from the Terminating Trouble Indicator in Handbook 62, Section 225.4.

1.4 Tests of Handbook 62, Section 251 should be performed before the following tests.

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.

3.1 Accessories Required

Amt	Code	Description	With ITE
As Reqd	KS-16887L1	Blocking Wedge	4023
or			
As Reqd	ITE-4069	Blocking Tool, Multicontact Relay	4023
1	R-3314	Stop Watch	4023
1	R-9572	Test Receiver	4023
*1		0.5 uf capacitor	

* Purchase locally

4. PREPARATION

4.1 Check that all keys and switches are normal or off on the AIS Sender Test circuit.

4.2 Select MF Outgoing Sender to be tested by means of the sender select switch. Lamp SON flashes at 60 IPM. If the sender is available for test, its SS- lamp will not be lighted.

4.3 A specific line circuit can be selected for test by means of the trunk select switch. The line circuit is available for test if its RMB- lamp is not lighted.

4.4 If a specific line circuit is not desired, leave the trunk select switch unoperated.

5. REGULAR CALL

TABLE A

TEST	NCI	AR BR CR	DIGITS TH	H	T	U
1	All Classes Of Intercept	All Office Codes	1	3	6	0
2			3	6	0	7
3			6	0	7	1
4			0	7	1	3

5.1 Using all classes of intercept and office codes, perform test 1 to 4 of Table A by performing steps 1 to 3 of Table B. Use each line circuit at least once while tests 1 to 4 of Table A are being performed.

6. SENDER TIMING

6.1 Trunk Test - Set up the numerical recording switches for Test 2, Table A. *Apply Test 2, Table A to Steps 4 to 11,* Table B.

6.2 Start Dial Signal - Apply Test 2, Table *A to Steps 12 to 14, Table B.*

6.3 Sender Functions - Apply Test 2, Table *A to Steps 15 to 17, Table B.*

6.4 Two out of Five Check RR- Relays - *Apply Test 2, Table A to Steps 18 to 20, Table B.*

7. DIGIT MISMATCH

7.1 Apply Tests 1 to 4, Table A to Steps *21 and 22, Table B.*

8. ALL TRUNKS BUSY

8.1 Insert 322A make busy plugs into all line circuit MB plugs at the Outgoing Trunk Test Frame or block all LB- relays operated in the Control and Connector Circuit. Set up numerical recording switches for Test 2, Table A. Momentarily operate key ST. Verify lamp ATB lights.

8.2 Remove all 322A make busy plugs or release all LB- relays. Momentarily operate key RLS. Verify all lamps extinguished.

9. CONTROL CIRCUIT SEIZURE TIME-OUT

9.1 Block normal relay DK in the AIS Multifrequency Outgoing Sender. Set up numerical recording switches for Test 2, Table A. Momentarily operate key ST. Verify lamp CST lights.

9.2 Release relay DK. Momentarily operate key RLS. Verify all lamps extinguished.

10. STUCK SENDER ALARM

10.1 Select sender under test with the sender select switch.

10.2 Block operated relays ON and TRL. Turn sender select switch to off position. Verify audible alarm and alarm indication lamps MA and A light.

10.3 Momentarily operate relay SR. Verify audible alarm is silenced and indication lamps extinguished while relay SR is operated.

10.4 Release relays ON and TRL. Audible alarm is silenced and lamp indications are extinguished.

11. TROUBLE NUMBER FREQUENCIES

11.1 Set up the test circuit for Test 1, Table A. Strap a 0.5 uf capacitor from 4 make relay RR4 to 4 make relay *RR1.*

11.2 Momentarily operate key ST. Verify the sender sticks, lamp TNF and corresponding number register N- lamps light.

11.3 Remove the 0.5 uf capacitor from 4 make *relay RR4 and 4 make relay RR1. Momen*tarily operate key RLS. Verify all lamps extinguished.

11.4 Insulate 2 make relay RRO. Using a R-9572 Test Receiver connect one end to ground the other to a 0.5 uf capacitor. Connect the capacitor to terminal 7 of Transformer T.

11.5 Momentarily operate key ST. Verify the sender sticks, lamp TNF and corresponding number register N- lamp lights.

11.6 Disconnect test receiver and capacitor from circuit. Momentarily operate key RLS. Verify all lamps extinguish.

Lines presented in Script Indicate new or changed information.

ATTCHMENT
Table B on Pages 3 and 4.

Manager, Product Engineering
Control Center

Reason for Reissue:
To make minor corrections in Paragraphs 6 and 11.

TABLE B

STEP	FUNCTION	OPERATION	RESULT
1	Regular Call	Set up Intercept No. on Numerical Switches	
2		Manually Operate Key ST	Lamps SS- and RMB- light while their respective circuits are seized. Lamps NCI,AR,BR,CR,TH, H,T & U light while corresponding digit is being outpulsed. Lamp KP lights while digits outpulsed. Lamps SDA and EP are lighted at end of test.
3		Momentarily Operate Key RLS	All Lamps Extinguished
4	Trunk Test	Block Normal Relay TG1 Manually operate Key ST	Lamps SDA and RMB- light. Class 0 or 3 Calls, SS- lamp starts flashing in 9.8 to 11.5 seconds Class 1 Call, SS- lamp Starts Flashing in 11.4 to 13.5 seconds.
5		Operate Key SS-	Lamps NSD and RVT Light
6		Release Relay TG1. Momentarily Operate Key RLS	All Lamps Extinguished
7		Block Normal Relay SB. Manually Operate Key ST	Lamps SDA and RMB- light. SS- lamp starts flashing, immediately for all Classes of intercept calls.
8		Operate Key SS-	Lamps TGF and NSD Light
9		Momentarily Operate Key RLS	All Lamps extinguished
10		Operate Key CTR. Repeat Step 7	Lamp SS- is extinguished.
11		Release Relay SB. Release Key CTR. Momentarily Operate Key RLS.	All lamps extinguished
12	Start Dial Signal	Block Normal Relay SD, Manually Operate Key ST	Lamps SDA and RMB- light. Class 0 or 3 calls, SS- lamp starts flashing in 18.3 to 21.6 seconds. Class 1 Call, SS- lamp starts flashing in 19.9 to 23.6 seconds.
13		Operate Key SS-	Lamp NDS lights
14		Release Relay SD. Momentarily operate key RLS	All lamps extinguished
15	Sender Function	Block Normal relay EP. Manually operate key ST.	Lamps SDA and RMB- light. Lamp EP lights, 3.25 to 3.85 seconds later the SS- lamp starts flashing

TABLE B (Cont'd)

STEP	FUNCTION	OPERATION	RESULT
16		Operate Key SS-	Lamp NDK lights
17		Release relay EP. Momentarily operate key RLS	All lamps extinguished
18	2 out of 5 check, RR Relays	Block operate relay RR4, Manually operate key ST	Lamps SDA, RMB-, and KP light Sender times out, SS- lamp starts flashing
19		Operate key SS-	Lamp NDK lights
20		Release Relay RR4. Momentarily Operate key RLS	All lamps extinguished
21	Digit Mismatch	Block normal relay TS Manually operate key ST	Lamps RMB-,SDA,KP,MM,H and 2 out of 5 N- lamps representing the H digit are lighted. Lamp SS- flashing.
22		Release relay TS Momentarily operate key RLS	All lamps extinguished