DISTRICT AND INCOMING SELECTOR CIRCUIT TRANSMISSION TESTS PANEL OFFICES

1. GENERAL

1.01 This section describes the procedures for making transmission measurements on district and incoming selector circuits in panel offices.

1.02 This section is reissued to move former Tests E, F, and G to Section 215-722-501, Issue 1; to move former Tests H, I, and J to Section 211-120-501, Issue 2; and to revise the title.

1.03 The tests covered are:

A. District Selector Circuits—Subscriber Link Type: This test checks transmission loss through the district selector circuit, subscriber link type, using a district selector test frame.

B. District Selector Circuits—Line Finder Sender Selector Type: This test checks transmission loss through the district selector circuit, line finder sender selector type, using a district selector test set.

C. District Selector Circuits—Line Switch Type: This test checks transmission loss through the district selector circuit, line switch type, using a district selector test set.

D. 3-Wire Incoming Selectors: This test checks transmission loss on 3-wire incoming selectors using incoming selector test set.

1.04 The transmission test requirements for most circuits are shown on the circuit drawings. Requirements not shown on the drawing should be furnished locally.

Note: Transmission test requirements for the circuits covered in this section are based on measurements made between 600 ohm impedance. The actual losses measured between 600 ohm impedance are not the same as the losses inserted in a connection by the circuits covered in this section because the actual service connection is approximately 900 ohms. However, the measurements covered in this section are adequate to indicate whether there is trouble in the circuits being tested.

1.05 When testing 3-wire incoming selectors, refer to Section 215-320-502 which covers manual tests of incoming selector circuits.

1.06 The 23A transmission measuring set is referred to as TMS.

1.07 The TMS may be used in either horizontal (meter face up) or vertical position.

1.08 The TMS should be calibrated each time before starting a series of tests per directions provided with set.

1.09 TMS scale reading should be obtained within the 0 to 5 dB range by operation of ADD DBM switch.

1.10 The INPUT switch on the TMS should be in the 600 position for all tests in this section.

1.11 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 3 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.

2. APPARATUS

2.01 The apparatus required for each test is shown in Table A. The details of each item are covered in the paragraph indicated by the number in parentheses.

2.02 Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P6C cord).

2.03 23A TMS.

TABLE A

APPARATUS	TESTS			
	A	B	C	D
Cord (2.02)	2	1	1	*
184 Plugs			√	
Head Telephone Set		1	1	
District Selector Test Set ES-239413		1	1	
Incoming Selector Test Set				1
District Selector Test Frame	1			
Test Set (2.03)	1	1	1	1

* 3 or 4

√ As required

3. METHOD

STEP	ACTION	VERIFICATION
A. District Selector Circuits—Subscriber Link Type		
1	At district selector test frame— Restore all keys to normal.	
2	Using P3E cord, connect S jack of test frame to MEAS jack of TMS.	
3	Patch R jack to OS jack on test frame using P3E cord.	
4	Operate RN key.	When test circuit restores to normal— NOR lamp lighted.
5	When NOR lamp lights— Restore RN key.	NOR lamp extinguished.
6	Operate BBC, LP keys.	
7a	If test of particular circuit is required— Operate PC key.	
8	Operate ST key.	
9a	If test of particular circuit is required— Dial numbers as shown on particular circuit chart for circuit to be tested, operating STP key momentarily each time dash appears after a digit. ***Note:*** Following release of the STP key between digits, the next digit should not be dialed until the PCD lamp lights. Check that the progress lamps indicate the correct district selector.	When test circuit is ready for next digit to be dialed— PCD lamp lighted. When selections are completed— TMS meter indicates loss through district selector circuit.
10	At completion of testing— At district selector test frame— Restore all keys to normal.	
11	Operate RN key.	
12	When NOR lamp lights— Restore RN key.	
13	Remove all test connections.	

STEP	ACTION	VERIFICATION
B.	**District Selector Circuits—Line Finder Sender Selector Type**	
1	At district selector test set— Restore all keys to normal.	
2	At line finder frame— Connect B-GRD cord of district selector test set to A jack on finder jack panel.	
3	Connect TST cord of test set to DIAL jack of TMS.	
4	Using P3E cord, connect MEAS jack of TMS to C or E jack as equipped on line finder jack panel. ***Note:*** C jack for first line relay rack frame. E jack for testing through second (if provided) line relay rack frame.	
5	Connect head telephone set to TEL jack of district selector test set.	
6a	If district selector test set is provided with BY cord— Connect BY cord to T jack on line finder jack panel associated with selector to be tested.	BY lamp does not light. ***Note:*** If BY lamp lights, it indicates that selector under test is busy. The test cannot proceed until the selector restores to normal.
7b	If district selector test set is not provided with BY cord— Note that selector to be tested is normal, then insert 184 plug into T jack associated with selector to be tested.	
8c	If coin district selector is under test— At district selector test set— Momentarily operate C key.	C lamp lighted.
9	At TMS— Operate DIAL key.	
10	At district selector test set— Operate ST-M key.	Dial tone heard.
11	When dial tone is heard— Dial number of transmission test line in same office.	
12	At TMS— Restore DIAL key.	TMS indicates transmission loss through the line finder district selector and the incoming

STEP	ACTION	VERIFICATION
		selector through which the connection to the transmission test line was completed.
13	Operate DIAL key.	
14	At district selector test set— Restore ST-M key.	Line finder selector restored to normal.
15	Remove all test connections.	

C. District Selector Circuits—Line Switch Type

1	At district selector test set— Restore all keys to normal.	
2	Connect head telephone set to TEL jack of district selector test set.	
3	Connect TST cord of test set to DIAL jack of TMS.	
4a	If provided— Operate LS key.	
5	Connect B-GRD cord of test set to A jack on district selector frame jack panel.	
6	After verifying that district selector to be tested is normal— Using P3E cord, connect MEAS jack of TMS to TMB jack of district selector.	
7b	If coin district selector is under test— Momentarily operate C key.	C lamp lighted.
8	At TMS— Operate DIAL key.	
9	At district selector test set— Operate ST-M key.	Dial tone heard.
10	When dial tone is heard— Dial number of transmission test line in same office.	
11	At TMS— Restore DIAL key.	TMS meter indicates transmission loss through the district selector and incoming selector through which the connection to the transmission test line was completed.
12	Operate DIAL key.	

STEP	ACTION	VERIFICATION
13	At district selector test set— Restore ST-M key.	District selector restored to normal.
14	Restore all keys to normal.	
15	Remove all test connections.	

D. 3-Wire Incoming Selectors

1	Using P3E cord, connect TST jack of incoming selector test set to DIAL jack of TMS.	
2	At incoming selector test set— Operate proper compensating resistance keys.	
3	Set up numerical keys for number of transmission test line.	
4	Using P3E cord, connect MEAS jack of TMS to T or TMB jack of incoming selector circuit.	
5	At TMS— Operate DIAL key.	
6	At incoming selector test set— Momentarily operate ST key.	Incoming selector makes selections.
7	After selections are completed— At TMS— Restore DIAL key.	TMS meter indicates loss through incoming selector through which the connection to the transmission test line was completed.
8	Remove all test connections.	