2600-CYCLE E1F SINGLE-FREQUENCY SIGNALING CIRCUIT (SD-98089-01) IN-SERVICE TESTS USING TESTING AND MONITORING CIRCUIT (SD-96519-01) COMMON SYSTEMS

1. GENERAL

1.01 This section describes a method of testing a 2600-cycle single-frequency signaling circuit while in service using testing and monitoring circuit per SD-96519-01, Issues 1 and 2-AR (J98613Y or J98613AY).

Note: This section applies only to Issues 1 and 2-AR of SD-96519-01.

1.02 The tests covered are:

A. ***Transmitted Tone Level:*** This test checks the level of the single-frequency tone as sent on the line.

B. ***Received Tone Level:*** This test checks the level of the 2600-cycle tone received from the distant office.

C. ***Monitoring:*** This test gives an indication of the condition of the circuits, whether idle (tone on), seized (tone off), revertive pulsing (pulses of high level tone), or supervisory signals (low-level tone).

1.03 When the results of these tests indicate the need for a more complete check or readjustment of the signaling circuit, it should be removed to the 2600-cycle signaling testing position J98613AY for out-of-service tests and readjustments per Section A204.580.

Caution: If this section is used as a preliminary check test, observe the following precautions. The signaling unit should be in normal operating position for several minutes to allow mercury in 291-type relay to assume operating conditions.

1.04 Readings obtained on TMS are with respect to 1 mw.

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.

TABLE A

APPARATUS	TESTS A	B	C
Monitoring Circuit (2.02)	1	1	1
No. 13A Transmission Measuring Set (TMS), or Equivalent	1	1	1
Head Telephone Set	1	1	1
Cord (2.03)	1	1	1
Cord (2.04)	1	1	1
Cord (2.05)	1	1	1
Tool (2.06)	—	—	—

2.02 Monitoring circuit, J98613Y or J98613AY (SD-96519-01).

2.03 Testing cord, No. 2W42A (W2DL cord 5-1/2 feet long, equipped with one No. 310 plug and No. 35 cord tips).

2.04 Patching cord, P3E cord, 3 feet long, equipped with two No. 310 plugs (No. 3P7B cord).

2.05 Patching cord, P8E, 12 feet long, equipped with one KS-8585, List 10 plug and one KS-8586, List 7 socket.

2.06 Disengaging tool, P-43C851, for removing unit from working position.

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests		
1	Connect IN terminals of TMS to 1 MW SUP jack of testing circuit.	

STEP	ACTION	VERIFICATION
2	Calibrate TMS in accordance with appropriate practice (see Section A702.612 for No. 13A TMS).	
3	Remove connection from IN terminals of TMS to 1 MW SUP jack.	
4	Connect CAL MEAS jack of monitoring circuit to IN terminals of TMS.	Observe TMS reading, record.
5	Remove connection from CAL MEAS jack of monitoring circuit to IN terminals of TMS.	
6	Patch CAL OUT jack of monitoring circuit to MON IN jack of monitoring circuit.	
7	Connect AMP OUT jack of monitoring circuit to IN terminals of TMS.	
8	Adjust GAIN potentiometer of monitoring amplifier to obtain reading recorded in Step 4 on TMS.	
9	Remove patch from CAL OUT jack of monitoring circuit to MON IN jack of monitoring circuit.	
10	Connect signaling unit to monitoring circuit.	

4. METHOD

STEP	ACTION	VERIFICATION
	A. Transmitted Tone Level	
11	Patch LINE XMT jack of monitoring circuit to MON IN jack of monitoring circuit.	When circuit is idle (tone on), steady reading on TMS of -36 ± 1 db.
12	Remove patch from LINE XMT jack of monitoring circuit to MON IN jack of monitoring circuit.	
13	Disconnect signaling unit from monitoring circuit.	
	B. Received Tone Level	
11	Patch LINE RCV jack of monitoring circuit to MON IN jack of monitoring circuit.	When circuit is idle (tone on), steady reading on TMS of -13 ± 6 db.
12	Remove patch from LINE RCV jack of monitoring circuit to MON IN jack of monitoring circuit.	
13	Disconnect signaling unit from monitoring circuit.	

STEP	ACTION	VERIFICATION
	C. Monitoring	
11	Remove connection from AMP OUT jack of monitoring circuit to IN terminals of TMS.	
12	Plug head telephone set in MON OUT TEL SET jack of monitoring circuit.	
13	Patch LINE XMT jack of monitoring circuit to MON IN jack of monitoring circuit.	When circuit is idle — Tone is heard. When circuit is seized — At least five groups of louder tone pulses preceding lower steady tone is heard. Called party answers — No tone is heard. ***Note:*** If operator answers, tone is heard. Busyback, tone pulses of 60 ipm are heard. Reorder or overflow, tone pulses of 120 ipm are heard.
14	Remove patch from LINE XMT jack of monitoring circuit to MON IN jack of monitoring circuit.	
15	Patch LINE RCV jack of monitoring circuit to MON IN jack of monitoring circuit.	When circuit is idle — Tone is heard. When circuit is seized — No tone is heard. After circuit is seized — At least five louder tone pulses followed by low-level tone and then no tone is heard.
16	Remove patch from LINE RCV jack of monitoring circuit to MON IN jack of monitoring circuit.	
17	Remove head telephone set from MON OUT TEL SET jack of monitoring circuit.	
18	Disconnect signaling unit from monitoring circuit.	