

PBX TRUNK RELAY EQUIPMENT  
1000-HERTZ TRANSMISSION TEST  
USING PORTABLE TRANSMISSION MEASURING SET  
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes the method of making a 1000-hertz transmission test on the trunk relay equipment associated with trunks to a PBX from selector multiple with connector multiple in step-by-step offices.

1.02 This section replaces Test C of Section 226-588-500, Issue 2.

1.03 The PBX attendant should be notified that the trunk will be out of service for the period of test.

1.04 The transmission test requirements for most components are shown on the circuit drawings (SDs), circuit layout cards, or local trunk records.

1.05 The transmission loss indicated by the transmission measuring set (TMS) meter includes the connecting circuits used to complete the connection.

1.06 The transmission loss indicated by the TMS meter is the actual measured loss (AML) in dB of the circuit under test and is made under the same conditions as expected measured loss (EML) was made. If the milliwatt supply is extended for purpose of a test, the loss caused by the extension will have to be measured and subtracted from the AML to determine the loss of the circuit under test.

1.07 **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 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 23A TMS J94023A.

2.02 1011G handset (dial hand test set), equipped with a 2W38A cord assembly consisting of W2CK cord, 471A jack, and 310 plug.

2.03 Special patching cord, wired and equipped in accordance with Fig. 1, made up locally. (Required only where the trunk apparatus is located on the connector frame and the transmission test line circuit SD-32021-01 is not provided.)

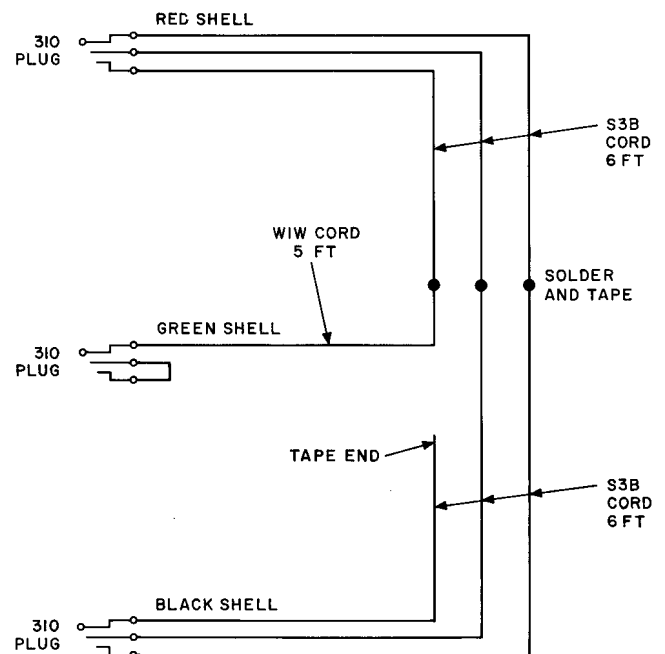


Fig. 1

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**2.04** W3A patching cord, 12 feet long, equipped with a 310 plug and three KS-6780 connecting clips with three 108 cord tips, rubber insulators (3W3A cord).

**2.06** P3E patching cord, 6 feet long, equipped with two 310 plugs (3P7A cord).

**2.05** P3H patching cord, 10 feet long, equipped with a 310 plug and a 240A plug (3P2A cord).

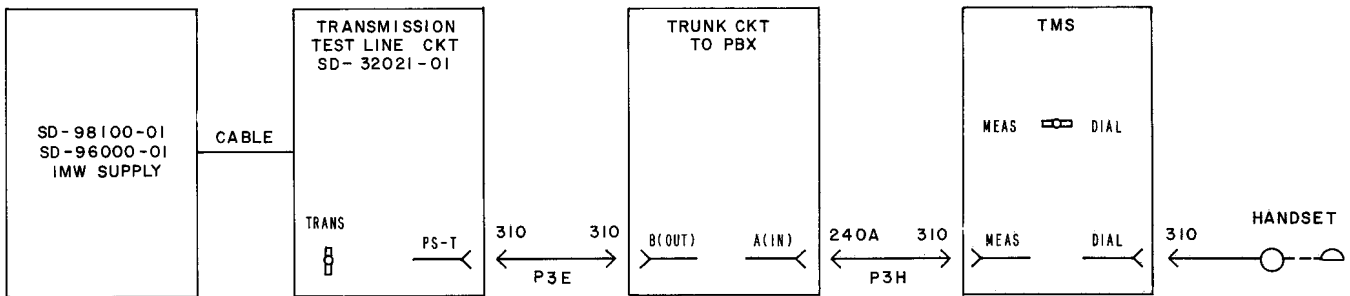
**3. METHOD**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
1	Calibrate TMS in accordance with Section 103-223-100 covering the 23A TMS.	
2	On TMS— Operate INPUT key to 900.	
3a	If trunk apparatus is located on connector frame and office is equipped with transmission test line circuit SD-32021-01 (Fig. 2)— At transmission test line circuit— Operate TRANS key.	
4a	At connector frame— Insert 310 plug of P3E cord into PS-T jack of transmission test line.	
5b	If trunk apparatus is located on connector frame and office is not equipped with transmission test line circuit SD-32021-01 (Fig. 3)— At connector frame— Insert green shelled plug of special patching cord (Fig. 1) into jack 4 of connector test line (SD-31653-01).	
6b	Insert black shelled plug of special patching cord (Fig. 1) into jack 3 of connector test line (SD-31653-01).	
7b	At distributing frame— Using frame distributing wire— Temporarily connect trunk unit of test line circuit for one-way transmission test to connector test line associated with connector frame to which special patching cord is connected.	
8c	If trunk apparatus is located on relay rack (Fig. 4)— Using frame distributing wire— Temporarily extend trunk unit of test line circuit for one-way transmission test from	

STEP	ACTION	VERIFICATION
	distributing frame to relay rack on which trunks under test are located.	
	<i>Note:</i> Spare pair in office cabling may be used to extend test line to relay rack.	
9c	Connect T, R, S leads of extended test line circuit to KS-6780 connecting clips attached to white, blue, and red leads respectively of W3A cord.	
10	Insert 310 plug of P3E cord, special patching cord (Fig. 1), or W3A cord into MEAS jack of TMS.	Note level of 1-mw supply.
11	Remove plug from MEAS jack of TMS.	
12	At frame on which trunk circuits under test are located— Insert 310 plug of handset into DIAL jack of TMS.	
13	Operate handset MON switch.	
14	On TMS— Operate DIAL key.	
15	Insert 310 plug of P3H cord into MEAS jack of TMS.	
16	Insert 240A plug of P3H cord into test jack A (incoming end) of trunk under test.	
17	Using handset— Determine that trunk under test is idle.	
18a	If trunk apparatus is located on connector frame and office is equipped with transmission test line circuit SD-32021-01 (Fig. 2)— Insert 310 plug of P3E cord into test jack B (outgoing end) of trunk under test.	
19b	If trunk apparatus is located on connector frame and office is not equipped with transmission test line circuit SD-32021-01 (Fig. 3)— Insert red shelled plug of special patching cord into test jack B (outgoing end) of trunk under test.	
20c	If trunk apparatus is located on relay rack (Fig. 4)—	

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STEP	ACTION	VERIFICATION
	Insert 310 plug of W3A cord into test jack B (outgoing end) of trunk under test.	
21	Operate handset TALK switch.	
22	Dial one or two digits, as required, to cause trunk to ring, trip, and cut through for testing.	1000-hertz tone heard.
23	On TMS— Operate MEAS key.	TMS meter indicates transmission loss.
24	Subtract reading noted in Step 10 from reading of Step 23 and record difference per local instructions.	
25	Remove test plugs from test jacks A, B of trunk.	
26	On TMS— Operate DIAL key.	
27	Repeat Steps 16 through 26 for each trunk to be tested at that location.	
28d	If no other tests are to be made— Remove all patching cords.	



**Fig. 2**

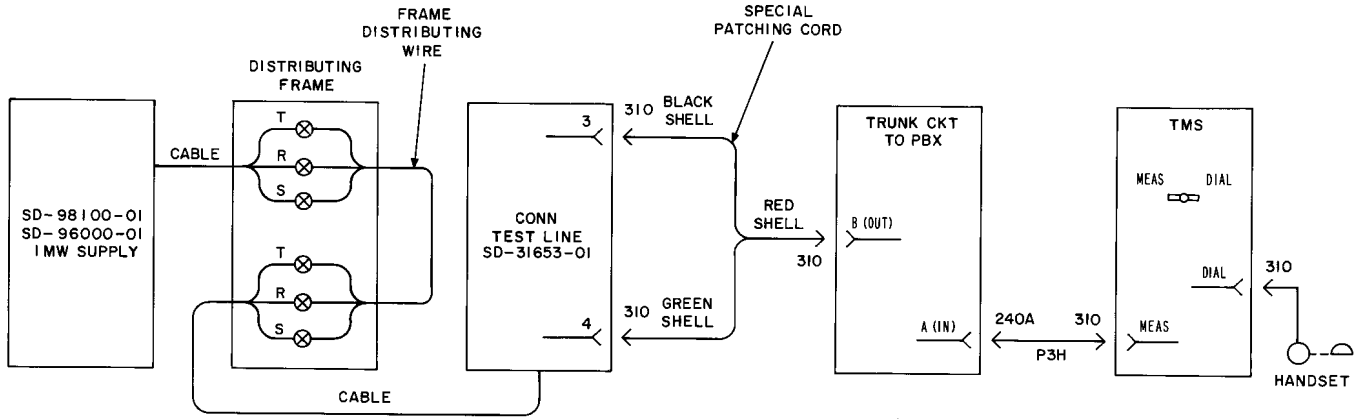


Fig. 3

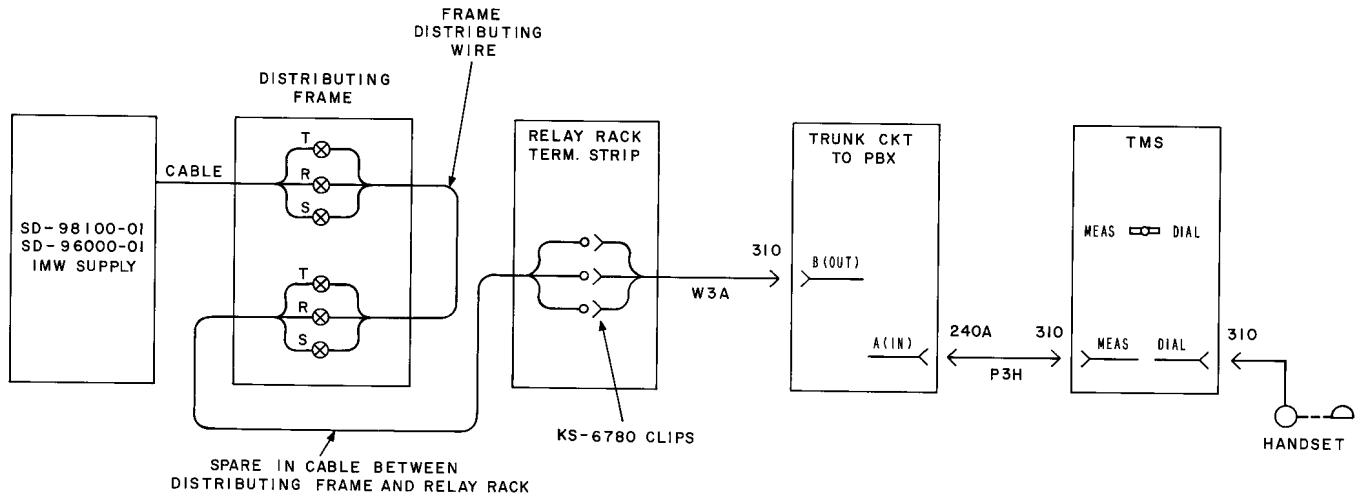


Fig. 4