CALL-THROUGH TESTS
STEP-BY-STEP OFFICES

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1. GENERAL

1.01 This section describes a method of making call-through tests in step-by-step offices, using the test set per Drawing DS-30079-01. It is issued to substitute a locally designed test set in place of the AT&T Co standard set.

1.02 Call-through tests are used primarily as an aid to the analysis and location of suspected trouble conditions in the equipment. It is an especially valuable tool for locating the type of troubles which are normally lost due to switch trains falling back to dial tone.

1.03 When call-through tests are employed for trouble detection purposes, the general method of routing calls outlined may be followed, or the calls may be confined to the particular channels in which a prevalence of trouble is suspected.

1.04 Through calls should usually be made in relatively busy traffic periods in order to obtain distribution throughout the equipment. In this connection, care should be exercised to avoid holding switch trains on test calls longer than necessary to locate a particular trouble condition.

1.05 The call-through test set is a versatile tool in the hands of an experienced analyzer. The tests described are only the basic ones. As the analyzer becomes more proficient in its use, it is expected that many additional applications will be developed to meet the individual needs of a particular office.

2. APPARATUS

2.01 Call-Through Test Set per Drawing DE-30079-01.

2.02 11 - P3E Cords equipped with No. 310 Plugs (3P7A).

2.03 One P2J Cord equipped with No. 310 Plugs (2P9B).

2.04 One Operator's Telephone Set (52 type).

3. PREPARATION

(A) Selection of Central Office Equipment

3.01 If call-through tests are conducted on a routine basis, the line equipments should be distributed as evenly as possible throughout the office. These lines should be varied periodically in order that all line groups will be used in conjunction with call-through tests.

3.02 Line equipments may also be assigned on the basis of specific trouble patterns disclosed by analysis of the various reports available to the analyzer.

(B) Selection of Test Call Numbers

3.03 Groups of called numbers should be selected so that test calls may be made to various terminations. Connector terminals in the same office or other dial offices which may be reached by dialing should be used. These may be the terminals associated with the connector multiple test line, terminals assigned to a line permanently made busy, terminals to which a distinctive tone has been connected, or unassigned terminals, in which case an intercepting operator will be reached.

(C) Preparation of Test Set

3.04 With all keys normal, connect 48-volt battery and ground to the test set using the 2P9B cord.

3.05 Connect the 10 lines to the analyzer desk jack strip using the 10 P3E cords.

3.06 In offices arranged for AMA operation, connect the CL jack of test set to CL jack of analyzer desk jack strip using a P3E cord.

3.07 At the IDF, cross connect 10-line equipments to the terminal strip associated with the analyzer desk strip.

4. METHOD

STEP	ACTION	VERIFICATION
1	Operate battery and buzzer keys.	
	(A) To Originate a Call	
	Testing Through SXS Equipment Only	
2	Operate (SXS) key.	On lamp lighted.
3	Operate (T-HD) key associated with line equipment to be used for test to TALK position.	(C) lamp lighted indicating T and R continuity.
4	Dial test number.	(C) lamp remains lighted.
	Trouble Encountered	
5	Loss of T, R, or sleeve continuity.	(OS) lamp lighted. Call is held to point of trouble.
6	Reversal of T and R conductors.	(RV) lamp lighted. Call is held to point of trouble.
7	T or R crossed with other T or R.	(X) lamp lighted. Call is held to point of trouble.
	Testing Through SXS-AMA	
2	Operate (AMA) key.	(ON) lamp lighted.
3	Proceed as in steps 3 thru 7.	
	(B) To Hold a Call	
2	Operate associated (T-HD) key to HOLD position.	(HD) lamp lighted.
	NOTES: A connector may be released while the train is held to last selector by operating OTR key while (T-HD) key remains in TALK position.	
	Operation of the OS key will disable the sleeve continuity test.	

5. REPORTS

5.01 The required record of these tests should be entered on the proper form.