

COMMON SYSTEMS  
TEST TERMINATION CIRCUIT  
FOR TESTING OUTGOING TRUNKS,  
WITH E-TYPE TELEPHONE REPEATERS  
ARRANGED FOR REVERSE  
BATTERY SUPERVISION

CHANGES

B. CHANGES IN APPARATUS

B.1 Added

1-552H(TO) key, Fig. 2  
1-274J(A) inductor, Fig. 2  
(previously optional)

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Fig. 1 is rated "Mfr. Disc." and is superseded by Fig. 2. Fig. 2 provides a (TO) key for open circuit termination for use in making stability tests on outgoing trunks with E-type telephone repeaters.

D.2 Circuit Note 102 is added for record purposes.

D.3 Designation "TO" is added to key top figure.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

This circuit is used in crossbar, toll or panel offices to provide a test termination at the outgoing trunk test frame when gain and stability tests are to be made on outgoing trunks.

2. WORKING LIMITS

None

3. FUNCTIONS

3.1 To provide a 900 ohm termination for use in making gain measurements on outgoing trunks with E-type telephone repeaters.

3.2 To provide a short-circuit termination for use in making stability tests on outgoing trunks with E-type telephone repeaters.

3.3 To provide an open-circuit termination for use in making stability tests on outgoing trunks with E-type telephone repeaters. (Fig. 2)

4. CONNECTING CIRCUITS

4.1 No. 1 or Tandem Office Outgoing Trunk Test Frame - SD-25177-01.

4.2 Common Systems Manual Outgoing Trunk Test Circuit - SD-95476-01.

4.3 Panel Systems Outgoing Trunk Test Frame - SD-21610-01.

4.4 Panel Incoming Selectors Such As - SD-21115-01.

4.5 Crossbar No. 1 Incoming Trunk Circuit Such As - SD-25875-01.

4.6 Crossbar Tandem Office Tandem Trunk Circuit Such As - SD-25887-01.

DESCRIPTION OF OPERATION

5. EQUIPMENT LAYOUT

The equipment consists of two jacks and two or three turn-button keys mounted on a strip which is located in the miscellaneous jack field of the outgoing trunk jack bay. When the 274 J inductor is furnished, it is mounted at some location convenient to the test board.

6. GENERAL

To use the test termination circuit, its TRK jack is patched to the test jack of the trunk under test and its TST jack is patched to the T1 or T2 jack of the outgoing trunk test circuit. If it is desired to circumvent the OGT test circuit, use the 3P3B cord to patch the (L) jack of the misc. ckt. for the OGT test fr. to the (TST) jack. With the TO, TR, and TS keys of the test termination circuit in the unoperated position, a call is originated at the test board to the test line as required. When the call to the test line is completed and the TO, TS, or TR key is operated as outlined in Paragraph 7, the patching cord from the TST jack to the T1 or T2 jack of the OGT board is removed as outlined in Paragraph 8.

7. APPLYING TEST TERMINATION

7.1 Resistance Termination

7.11 Fig. 1

With a call set up as described in Paragraph 6, operation of the TR key bridges the 900 ohm (TR) resistance across the tip and ring. Option "Z", consisting of

inductor (A), is provided when trunks to step-by-step offices or to offices using North Electric relay equipment are to be tested. Inductor (A) shunts the (TR) resistor furnishing low DC resistance to hold the (A) relay of these trunks. However, the high inductance of the inductor maintains the impedance of the test termination at a value suitable for making gain tests over the required frequency range.

7.12 Fig. 2

With a call set up as described in Paragraph 6, operation of the TR key bridges the 900 ohm (TR) resistor across the tip and ring. Inductor (A) shunts the (TR) resistor to furnish a low DC resistance to hold the (A) relay of the trunk. However, the high inductance of the inductor maintains the impedance of the test termination at a value suitable for making gain tests over the required frequency range.

7.2 Open-Circuit Termination (Fig. 2)

With a call set up as described in Paragraph 6, operation of the TO key bridges

inductor (A) across the tip and ring. The inductor furnishes a low DC resistance to hold the (A) relay of the trunk, but maintains the impedance of the test termination at virtually an open circuit value over the required frequency range.

7.3 Short-Circuit Termination (Fig. 1 or 2)

With a call set up as described in Paragraph 6, operation of TS key places a short-circuit across the tip and ring of the trunk.

8. RELEASING TEST CIRCUIT

With either the TO, TR, or TS key operated the (A) relay of the trunk under test is held operated by the test termination circuit. Under this condition the cord patching the TST jack and the T1 or T2 jacks may be removed thus releasing the outgoing trunk test circuit.

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