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STEP-BY-STEP SYSTEMS
NO. 1, 350A, 355A OR 35-E-97
TEST CONNECTOR CIRCUIT
FOR USE IN TESTING SUBSCRIBER LINES
AND FOR USE IN VERIFICATION SERVICE

CHANGES

B. Changes in Apparatus

B.1 Superseded	Superseded By
C Network, Fig. 1 Z Option 179A Network	C Network, Consisting of 1-542D Capacitor and 1-KS13490 L2 Resistor 150 Ohms G Option

C. Changes in Circuit Requirements Other Than Those Caused by Changes in Apparatus

C.1 On Page 1 of the Circuit Requirements Table, change the BSP Fig. for the A relay from 11 to 726. This change will provide compatibility with the Bell Telephone Laboratories, X-Spec #75514.

D. Description of Changes

D.1 Option Z is rated Mfr. Disc. and is superseded by Standard Option G, to replace the present contact protection network with one that reduces existing costs.

D.2 Circuit Note 104 is changed and Note 108 is added to reflect the above modification.

D.3 BSP and Key-Sheet numbers are added to the Supporting Information Table.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5225-LCB
WECo DEPT 5152-FLS-WEA

STEP BY STEP SYSTEMS NO. 1, 350A, 355A OR 35E97 TEST CONNECTOR CIRCUIT FOR USE IN TESTING SUBSCRIBER LINE AND FOR USE IN VERIFICATION SERVICE

CHANGES

D. DESCRIPTION OF CHANGES

D.1 All references to option J were removed and the C network was designated J or Z option with 150W J and 160W Z option.

D.2 The circuit title formerly read:

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D.3 This circuit is now arranged to be used in a 35E97 office.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 2363-FM-RJJ

STEP BY STEP SYSTEMS
NO. 1, 350A OR 355A
TEST CONNECTOR CIRCUIT
FOR USE IN TESTING SUBSCRIBER LINES
AND FOR USE IN VERIFICATION SERVICE

CHANGES

B. CHANGES IN APPARATUS

B.1	Superseded	Superseded by
	(C) Network 183A	179A

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Option R has been rated Mfr. Disc.

D.2 Option Z has been rated Mfr. Disc. and Option J has been added.

D.3 Note 106 is rated Mfr. Disc. and Note 107 is aadded.

1. PURPOSE OF CIRCUIT

This circuit is used primarily for establishing connections between a test or verification distributor and subscribers' lines for purposes of testing or verification.

2. WORKING LIMITS

2.1 None

3. FUNCTIONS

3.1 To provide direct connection between a test or verification distributor and subscribers' lines.

3.2 To provide for selecting any of 100 associated lines.

3.3 To connect ground to the S lead to the distributor line banks when this circuit is busy.

3.4 To restore to normal.

3.5 To provide for connections from a test desk to a Line Insulation Test Control Circuit for remote control of the latter circuit.

3.6 To provide access to P.U. Line Circuits from the test desk.

3.7 To place low resistance battery on the "test" sleeve when any but the last line in a hunting group is encountered (K option).

4. CONNECTING CIRCUITS

When this circuit is listed on a keysheet, the connecting information shown there should be followed. The following circuits are typical:

4.1 Test Distributor - SD-32007-01.

4.2 Verification Distribution for Use with Toll Train Circuits - SD-31851-01.

4.3 Miscellaneous Bank Multiple Circuit - SD-32129-01.

4.4 Connector Bank Multiple Circuit - SD-32128-01.

4.5 Miscellaneous Alarm Circuit or Switch Trouble Alarm Circuit for Connector Shelves - SD-32045-01.

4.6 Subscriber Line Circuit - SD-32133-01 or SD-31777-01.

4.7 Intercepting Trunk - SD-31337-01.

DESCRIPTION OF OPERATION

5. SEIZURE

This circuit is seized by the closure of a loop to its input line tip and ring. The (A) relay operates in series with that loop and operates (B). (B) connects ground to the line sleeve as a busy indication.

6. PULSING

On the first pulse, (D) and the vertical magnet operate. (D) holds over the train of pulses comprising the first digit while the vertical magnet follows the pulses, thereby stepping the switch to the level corresponding to the digit dialed. (D) releases after the first digit so all subsequent pulses operate the rotary magnet to rotary step the switch. Thus, the switch may be stepped from one terminal to another higher numbered terminal on the same level without first being released.

7. TESTING

After rotary stepping, the test tip, ring and sleeve are connected to the tip, ring and sleeve of the subscriber's line circuit.

8. VERIFICATION

After rotary stepping the test tip and ring are connected to the subscriber's line to permit monitoring to determine whether someone is talking on that line.

9. DETECTION OF PBX LINES (K, R OPTION)

On PBX lines, the H and S terminals are strapped together on all but the last line. On these lines, the (E) relay operates from battery through the winding of the cut-off relay in the line circuit. The cut-off relay will not operate in series with the high resistance (E) relay. (E) operated connects battery through the A resistor to the test sleeve to signal a Line Insulation Test Control Circuit in the same building that a PBX line has been encountered. The connection of ground to the test sleeve subsequent to the operation of (E) causes (E) to release.

10. RETURN TO NORMAL

When the loop to the (A) relay is opened, it releases releasing (B). When (B) releases, the release magnet is operated to restore the switch to normal.

11. TEST JACK

The test jack is provided for making the circuit busy and for testing the (A) and (E) relays. It may also be used as a means of allowing access to subscribers' lines for portable test sets.

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DEPT. 2335-PRR-FBB-JW