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STEP-BY-STEP SYSTEMS  
NO. 1, 350A, 355A OR 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS  
AND UNIVERSAL SWITCH FRAMES

CHANGES

B. Changes in Apparatus

B.1 Added

"or 55A conn block" to Fig. 11

D. Description of Changes

D.1 Connecting information "To Cosmic Test and Jack Panel Circuit" added by note 303.

D.2 "or 55A conn block" added to Figure 11.

D.3 Fig. 55 was changed to reflect the above changes.

F. Changes in CD Section

F.1 Add under Connecting Circuits:

4.8 Cosmic Test and Jack Panel Circuit - SD-2P016-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5245-LCB  
WECO DEPT 5152-RWH-WEA

STEP-BY-STEP SYSTEMS  
NO. 1, 350A, 355A OR 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS  
AND UNIVERSAL SWITCH FRAMES

CHANGES

B. Changes in Apparatus

B.1 Added

1 - 238 type (SP) Jack - Fig. 12

D. Description of Changes

D.1 Fig. 12 is added to the circuit as a means of clearing trouble or performing tests on miscellaneous relay rack mounted TOUCH-TONE testing equipment.

D.2 Reference to Fig. 12 is added to Notes 102 and 103.

D.3 Multiple Indications are added to Fig. 4.

D.4 Reference to Figs. 10, 11, and 12 is added to the Options Used Table.

F. Changes in CD Sections

F.1 Add Section 9 under SECTION II - DETAILED DESCRIPTION as shown below:

9. Spare Jack, Fig. 12

9.1 The jack of Fig. 12 allows connection to miscellaneous relay rack mounted TOUCH-TONE testing equipment for purposes of testing or clearing trouble.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5245-LCB  
WECO DEPT 5152-JMS-WEA

CIRCUIT DESCRIPTION

CD-32153-01  
ISSUE 4D  
APPENDIX 4D  
DWG. ISSUE 10D

STEP-BY-STEP SYSTEMS  
NO. 1, 350A, 355A OR 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS  
AND UNIVERSAL SWITCH FRAMES

CHANGES

D. Description of Changes

D.1 Figure 11, Test Post Circuit, and Note 101 are modified to permit connections to the 48V test jack supply (A) under certain conditions explained in Note 101. This change will decrease the number of wires and conserve a fuse on this circuit.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5225-LCB

WECo DEPT 5152-JMS-WEA

CIRCUIT DESCRIPTION

CD-32153-01  
ISSUE 4D  
APPENDIX 3D  
DWG ISSUE 9D

STEP-BY-STEP SYSTEMS  
NO. 1, 350A, 355A or 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS  
AND UNIVERSAL SWITCH FRAMES

CHANGES

B. Changes in Apparatus

B.1 Added

Resistor 12K, KS-13490, L1 - Fig. 11

D. Description of Changes

D.1 Fig. 11 is added to the circuit, and reference is added to Notes 101, 102, and 103

D.2 Note 302 is added.

D.3 Title formerly read:

STEP-BY-STEP SYSTEMS  
NO. 1, 350A, 355A AND 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS

D.4 The rating of Fig. 3 is changed to A&M Only for 355A.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5643-CEH-MR

STEP BY STEP SYSTEMS  
NO. 1, 350A, 355A OR 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS

CHANGES

D. Description of Changes

- D.1 Reference to use in No. 350A office is removed from Fig. 5.
- D.2 Note 104 is removed and reference is removed from Note 103, in accord with the change in Fig. 5.
- D.3 Reference to No. 1 office use is added to leads T and R of Fig. 51.
- D.4 Equipment Note 201 is added to cover the above changes.
- D.5 Fig. 10 is added to the circuit, and reference is added in Note 102.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5641-WCB-RMW

CIRCUIT DESCRIPTION

CD-32153-01  
ISSUE 4D  
APPENDIX 1D  
DWG ISSUE 7D

STEP BY STEP SYSTEMS  
NO. 1, 350A, 355A OR 356A  
MISCELLANEOUS CIRCUIT  
FOR ANGLE RELAY RACK BAYS

CHANGES

D. Description of Changes

- D.1 In Fig. 5, the SWMN jack is shown as X and W option.
- D.2 The rating of Fig. 5 is changed to A&M Only for 350A.
- D.3 Note 102 is modified and Note 104 is added to show the use of Fig. 5.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 2363-MPC-RJJ

**STEP-BY-STEP SYSTEMS**  
**NO. 1, 350A, 355A OR 356A**  
**MISCELLANEOUS CIRCUIT**  
**FOR ANGLE RELAY RACK BAYS**

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<u>SECTION I - GENERAL DESCRIPTION</u>	1	1.1 This circuit provides a switchman's talking line jack for intercommunication at Relay Rack Bays, provides AC and DC supply jacks for use with tests sets and remote control jack for testing with automatic trunk test circuit.
<u>SECTION II - DETAILED DESCRIPTION</u>	1	<u>SECTION II - DETAILED DESCRIPTION</u>
1. 48 VOLT BATTERY AND GROUND SUPPLY, FIG. 1	1	1. 48V BATTERY AND GROUND SUPPLY, FIG. 1
2. RINGING CURRENT SUPPLY, FIGS. 2 & 3	1	1.1 The jack of Fig. 1 provides battery and ground supply for test sets. The tests posts provide access to battery and ground for use when testing with a test receiver, voltmeter or other such test apparatus.
3. 22 VOLT 60 CYCLE SUPPLY, FIG. 4	1	2. RINGING CURRENT SUPPLY, FIGS. 2 AND 3
4. SWITCHMAN'S TALKING LINE, FIG. 5	1	2.1 The jack of Fig. 2 with the associated resistance lamp of Fig. 3, provides ringing supply for test sets.
5. CONNECTOR TEST LINE JACKS, FIG. 6	1	3. 22V 60 CYCLE SUPPLY, FIG. 4
6. 48 VOLT BATTERY, GROUND AND HIGH RESISTANCE GROUND SUPPLY, FIG. 7	1	3.1 The jack of Fig. 4 provides an AC supply for the test set used for checking timers used for overtime charging on coin and message rate trunks.
7. REMOTE CONTROL JACK, FIG. 8	2	4. SWITCHMAN'S TALKING LINE, FIG. 5
8. 130 VOLT TEST BATTERY, FIG. 9	2	4.1 The jack of Fig. 5 connects to the switchman's talking line, which has appearances at other points throughout the office. It is used when tests require the cooperation of two or more maintenance employees at different points in the office.
<u>SECTION III - REFERENCE DATA</u>	2	5. CONNECTOR TEST LINE JACKS, FIG. 6
1. WORKING LIMITS	2	5.1 The jacks of Fig. 6 are used in tests of prepay coin trunks and trunks with delayed ringing incoming from toll, to provide a connection from the connector test set used for testing these trunks.
2. FUNCTIONAL DESIGNATIONS	2	6. 48V BATTERY, GROUND AND HIGH RESISTANCE GROUND SUPPLY, FIG. 7
2.1 Conn. Blocks	2	6.1 The connecting block of Fig. 7 is used to provide battery, ground and high resistance ground in various parts of the office. These terminals are for use by a testman. The high resistance ground may be used for checking presence of ringing
2.2 Jacks	2	
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current where it is desirable not to trip the ringing, for checking corrections of relays or traffic registers without causing their operation, and similar use.

7. REMOTE CONTROL JACK, FIG. 8

7.1 The jack of Figure 8 provides control lead RC from the Automatic Trunk Test Circuit (ATT). A 32A test set can be used for remote operation of the ATT circuit.

8. 130 VOLT TEST BATTERY, FIG. 9

8.1 The jack of Figure 9 provides +130 volts and direct ground for use with test sets.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

1.1 None.

2. FUNCTIONAL DESIGNATIONS

2.1 Conn. Blocks

55A Test Terminal

2.2 Jacks

B&R	Connector Test Line
22V	22 Volts 60 Cycles
-48V	-48 Volts, Test Battery
±	Ringing Current
+130V	+130 Volts Test Battery
RCT	Remote Control
SWMN	Switchman's Talk

2.3 Lamps

± Ring. Current

3. FUNCTIONS

3.1 Provides a switchman's talking station.

3.2 Provides battery and ground supply for test sets.

3.3 Provides generator supply for test sets.

3.4 Provides 22V 60 cycle AC supply for test set used in checking timers.

3.5 Provides remote control jack for No. 1 offices with AMA.

3.6 Provides +130V for tests used in checking cold cathode tubes No. 1 offices with AMA.

4. CONNECTING CIRCUITS

When this circuit is listed on a key-sheet the connecting information thereon is to be followed.

4.1 Test Sets such as SD-90469-02, SD-25808-01.

4.2 Switchman's Talking Line - SD-32021-01.

4.3 Timer Test Set - SD-32031-01.

4.4 Connector Test Line for No. 355A - SD-31857-01.

4.5 Power Ringing Circuit - SD-80885-01.

4.6 22V AC Power Supply - SD-80818-01.

4.7 Automatic Trunk Test Circuit - SD-32206-01.

SECTION IV - REASONS FOR REISSUE

B. CHANGES IN APPARATUS

B.1 Added

1 238 Type Jack, (RCT)  
1 246 Type Jack, (+130)

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 This change was made to add remote control jack (Fig. 8) and +130 volt test battery jack (Fig. 9) to test miscellaneous circuits such as, Outgoing Trunk Circuit for Dial Coin Zone Service per SD-96522-01 or SD-96523-01, in No. 1 Offices with AMA.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2335-JML-FBB-ME