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STEP-BY-STEP SYSTEMS
NO. 355A OR 35E97
MISCELLANEOUS ALARM CIRCUIT
KEY, RINGING FUSE
AND FUSE ALARM CIRCUITS
FOR ALARMS AND RELAY RACK BAYS

CHANGES

D. Description of Changes

D.1 Precise tone lead designations are added to note 101.

D.2 Information is added to figure 37 and note 110 for a +48V battery filter fuse alarm.

D.3 Maintenance BSP information is added to Supporting Information.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 5225-LCB
WECo DEPT. 5152-RTO-WEA

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MISCELLANEOUS ALARM CIRCUIT
KEY, RINGING FUSE
AND FUSE ALARM CIRCUITS
FOR ALARM AND RELAY RACK BAYS

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 This circuit shows the various keys and fuse alarm equipment mounted on relay racks.

SECTION II - DETAILED DESCRIPTION

1. DESCRIPTION OF OPERATION

KEY EQUIPMENT

1.01 The various ringing leads, interrupter leads, tone leads, tripping battery and pickup leads are connected to the various circuits through the key equipment. In cases of trouble conditions the operation of the key disconnects the various leads from the connecting circuits to facilitate locating the lead in trouble. When T option is provided, operation of a key lights a guard lamp.

RINGING FUSE ALARMS

1.02 When the ringing supply lead is connected through fuses, a trouble condition will operate the ringing fuse which in turn connects current directly to a 0.180 ampere 48-volt battery fuse causing the T fuse to operate and send in an alarm, as described in 1.04.

COIN BATTERY, TELEPHONE REPEATER AND MESSAGE REGISTER VOLTAGE PLATE BATTERY FUSES

1.03 When one of these fuses blows, it connects the potential protected to a 0.180 ampere 48V fuse, which will blow and give an alarm as described in 1.04. The 100D resistor is provided to limit the current when 120V+ or 130V+ battery is connected to the 0.180 ampere fuse.

48- OR 24-VOLT FUSE ALARM

1.04 When a 48- or 24-volt fuse operates, battery will be connected through the FA or DF lead respectively, through the FA or DF lamp to the aisle pilot or alarm control circuit causing the lamp to light and to give a major or minor alarm, respectively.

NO-SUCH-NUMBER TONE FUSE ALARM

1.05 When a 48-volt, 1/2 amp no-such-number tone fuse of Fig. 40 operates, 48 volts is applied to the winding of the NT relay. The NT relay operates and supplies 48-volt battery through the FA lamp to the winding of a low resistance relay in the miscellaneous alarm circuit. This lights the FA lamp and sounds a minor audible alarm. Removal of the operated fuse silences the alarm and extinguishes the lamp. The FA resistor provides a path for operating the alarm relay when the FA lamp is open.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

None.

2. FUNCTIONAL DESIGNATIONS

None.

3. FUNCTIONS

3.01 Provides means for disconnecting the various leads from the associated connecting circuits in cases of trouble.

3.02 To cause an alarm to be given when fuses operate.

4. CONNECTING CIRCUITS

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

	No. 355A	No. 35E97
(a) Power Ringing Circuit	SD-80885-01 typical	SD-80885-01 typical
(b) Trunk Circuits	SD-31884-01 typical SD-31885-01 typical	SD-30889-01 typical
(c) Subscriber Line Circuit With Rotary Line Switch	SD-31259-01	
(d) Rotary Outgoing Trunk Switch Circuit	SD-31990-01	SD-30936-01

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(e) Operator Office Trunk Circuit	SD-31747-01 typical	SD-30890-01 typical
(f) Prepayment Coin Trunk Circuit	SD-31592-02	SD-31592-02
(g) Miscellaneous Alarm Circuit	SD-32192-01 typical	SD-30930-01 typical
(h) Tone Interrupter Circuit	SD-31825-01	
(i) Signal Circuit No-Such-Number Tone Supply	SD-96357-01	
(j) Test Trunk Ringing Circuit	SD-96474-01	SD-30966-01
(k) Telephone Repeater	SD-95465-01	SD-95465-01
(l) Interrupter Relay Circuit	SD-31868-01	
(m) Power Shelf Terminal Blocks (Automatic Electric Co)		H-62539 typical H-62707 typical

(n) Originating Register Circuit, Outpulsing Controller Circuit - SD-32351-01.

(o) TOUCH-TONE® Calling Signal to Dial Pulse Converter Circuits - SD-32328-01.

(p) Trunk Circuit - SD-31493-01.

SECTION IV - REASONS FOR REISSUE

D. Description of Changes

D.1 In Fig. 36 reference to +48V filter battery is added and Note 110 is added.

D.2 In Fig. 40, Mfr Disc. is removed from Note 109 and relocated to show reference to Fig. 40 only.

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