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COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION-TYPE B  
CROSSBAR NO. 1, PANEL, OR STEP BY STEP OFFICE

CHANGES

B. Changes in Apparatus

B.1 Added

Fuse, 70E, 0.180 ampere, App Fig. 11.

D. Description of Changes

D.1 App Fig. 11 has been added to show the addition of a 0.180 ampere fuse to be used when called for by the identifier circuit.

D.2 FS7 and Circuit Notes 102 and 104 have been changed to reflect the addition of App Fig. 11.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5223-MRM-MR

COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION  
CROSSBAR NO. 1, PANEL, OR STEP-BY-STEP OFFICE

CHANGES

B. CHANGES IN APPARATUS

B.1 Removed

Fuse, 70C, 3 amp, App. Fig. 5

D. DESCRIPTION OF CHANGES

D.1 The three amp fuse and W and X options are removed from FS6 and App. Fig. 5.-

D.2 Information for the A and B lead multiples in FS6 is changed to: "To other 1-1/3 or 3/4 amp fuses on same frame associated with same connecting ckt." It formerly read: "To other 1-1/3, 3/4 amp W option or 3 amp X option fuses on same frame associated with same connecting circuit."

D.3 Circuit Note 104 is changed to delete references to Options W and X.

D.4 Options W and X are removed from the Option Index.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2364-LRD-RJJ-GI

COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION  
CROSSBAR NO. 1, PANEL, OR STEP-BY-STEP OFFICE

CHANGES

A. CHANGES AND ADDED FUNCTIONS

A.1 This circuit is changed to show the addition of a 3/4 ampere fuse required for a series filament supply arrangement shown on Identifier Circuit, SD-95810-01, Issue 8-B.

B. CHANGES IN APPARATUS

B.1 In App. Fig. 5.

Superseded

Superseded By

Fuse, 70C, 3 Amp

Fuse 70M, 3/4 Amp

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 FS6 has been changed to show the addition of a 3/4 ampere fuse (Option W); the 3 ampere fuse formerly not designated is now designated Option X and is rated Mfr. Disc. A corresponding change has been made in App. Fig. 5. Circuit Note 102 has been revised to show how to apply Option W.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2335-MRM-FBB-DR

COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION  
CROSSBAR NO. 1, PANEL, OR STEP-BY-STEP OFFICE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The +130V feeder to the identifier circuit which formerly came directly from the power battery distributing circuit is now fused at the miscellaneous fuse board. Sheet note two (2) has been added to cover this change. The change also appears on the diagram CAD 2.

D.2 On circuits FS5 (leads P, G, L, FL, & FG) and FS9 (lead F) the wording has been changed from: "TO OTHER FRAMES REQUIRING THE SAME AISLE PILOT" to, (respectively): "TO OTHER IDENTIFIER FRAMES IN SAME AISLE" and "TO OTHER FRAMES IN SAME AISLE."

D.3 On diagram CAD 2, lead F, previously cabled with leads P, G, L, FL, & FG, is now cabled separately.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2335-LRD-FBB-C4

CIRCUIT DESCRIPTION

CD-95819-01  
Issue 2-D  
Appendix 1-D  
Dwg. Issue 3-D

COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION  
CROSSBAR NO. 1, PANEL, OR STEP BY STEP OFFICE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 In the cabling diagrams, connection of the switchman's talking line ckt. was removed from the DF terminal strip, CAD. 1, and connect to the Misc. T.S. on Fr., CAD. 2.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2335-JLB-FBB-NL

COMMON SYSTEMS  
MISCELLANEOUS CIRCUIT  
IDENTIFIER FRAME  
AUTOMATIC NUMBER IDENTIFICATION  
CROSSBAR NO. 1, PANEL OR STEP-BY-STEP OFFICE

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<u>SECTION I - GENERAL DESCRIPTION</u>	1	This circuit is designed for use in Panel, Crossbar No. 1, and Step-by-step offices arranged for Automatic Number Identification. It provides for the operation of audible and visual alarm signals when a fuse on the frame operates, and makes the Identifier Circuit busy when a 48 volt or 130 volt fuse operates in the Identifier. It also provides additional miscellaneous apparatus mounted on the Identifier Frame including a frame test battery, a frame line between frames, a remote control jack for the Outpulser Identifier Trunk Test Circuit and a spare jack.
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<u>SECTION III - REFERENCE DATA</u>	2	<u>SECTION II - DETAILED DESCRIPTION</u>
1. WORKING LIMITS	2	1. FRAME LINE BETWEEN FRAMES - FS1 OR FS8
2. FUNCTIONAL DESIGNATIONS	2	With Option 8 (Panel & Crossbar No. 1 Offices), communication may be established between ANI frames by plugging operator telephone sets into the (TEL) jacks on the frames. Talking battery is supplied through the connecting circuit. With Option 9 (Step-by step offices), the (SWMN) jacks provide the same feature.
3. FUNCTIONS	3	2. TEST BATTERY - FS2
4. CONNECTING CIRCUITS	3	Ground, high resistance ground, and -48 volt battery test terminals, -48 volt battery jack (A), or (48V) and +130 volt battery jack (C) or (+130) are provided for test purposes.
		3. SPARE JACK - FS3
		Spare jack (B) is furnished for possible future requirements.
		4. REMOTE CONTROL JACK - FS4
		Control leads (RC) and (AV) from the Outpulser Identifier Test Circuit (OIT) are brought out to the (RC) jack on the Identifier Frame. A 32A test set can be used for remote operation of the OIT circuit.
		5. FUSE ALARM - IDENTIFIER CKT. - FS5
		5.1 With Option 2 (Panel and Crossbar No. 1 Offices), the operation of a 48 volt circuit fuse in the Identifier supplies battery through the 221 ohm resistor to operate the (FA) relay through its primary winding in series with a relay to

ground in the Alarm Circuit. The Alarm Circuit relay operates and starts the audible alarm. The operation of the (FA) relay:

- (1) Grounds the (FA-) lead to the Trouble Ticketer Miscellaneous Circuit where a relay operates which makes the Identifier busy to all outpulsers. If the Identifier is in use when a fuse operates, the progress is allowed to complete before the Identifier is made busy.
- (2) In conjunction with the operated Alarm Circuit relay, lights the red (FA) lamp to indicate the frame where the fuse has operated.
- (3) Provides its own locking path to ground through the (AR) key normal.

5.1.1 The removal of the operated fuse releases the Alarm Circuit relay. This retires the audible alarm, extinguishes the (FA) lamp, and lights the (FG) lamp. Subsequently, when the (AR) key is operated momentarily, the circuit restores to normal.

5.1.2 The operation of the 20-amp feeder fuse causes the parallel 1-1/3-amp pilot fuse to operate, starting the alarm in the manner outlined above. The 20-amp fuse must be replaced before the pilot fuse is replaced.

5.1.3 The operation of a 130-volt circuit fuse causes the (FA1) relay to operate. The operation of (FA1) operates the (FA) relay, starting the alarm as described above.

5.2 With Option 3 (Step-by-step Offices), an operated 48-volt circuit fuse supplies battery through a 221 ohm resistor and the (FA) and (FA2) relays to ground. This causes the (FA) and (FA2) relays to operate, lighting the (FA) lamp. (FA) locks to the (AR) key. (FA2) operated grounds leads "1" and "2", starting the audible alarm. Removal of the operated fuse releases relay (FA2), retires the audible alarm, extinguishes the (FA) lamp, and lights the (FG) lamp. Subsequently, when the (AR) key is operated momentarily, the circuit restores to normal.

5.2.1 The operation of the 20-amp feeder fuse causes the parallel 1-1/3-amp pilot fuse to operate, starting the alarm as described above. The 20-amp feeder fuse must be replaced before the pilot fuse is replaced.

5.2.2 The operation of a 130-volt circuit fuse causes the (FA1) relay to operate. The operation of (FA1) operates relays (FA) and (FA2), starting the alarm as described above.

## 6. FUSE ALARM - SECONDARY NETWORK AND BUS CONNECTOR CKT. - FS9

6.1 With Option 10 (Identifier frame equipped with Secondary Network and Bus Connector Circuit), the operation of the 20-amp feeder fuse followed by the operation of the parallel 1-1/3-amp pilot fuse, or the operation of any 1-1/3-amp circuit fuse in the Secondary Network and Bus Connector Circuit, supplies battery through a 221-ohm resistor and (FA3) relay to ground, operating relay (FA3). (FA3) operated lights the (FA) lamp shown in F55. With Option Z (Panel & Crossbar No. 1 Offices), (FA3) operated supplies battery through the (FA2) resistor to lead F, starting an audible alarm. With Option Y (Step-by-step Offices), (FA3) operated grounds leads "1" and "2", starting an audible alarm. With either option, the lamp is extinguished and the alarm silenced when the operated fuse is removed.

6.2 The 20-amp feeder fuse must be replaced before the pilot fuse is replaced.

6.3 The 221-ohm resistors are provided to protect the alarm lead in case of a trouble ground.

## SECTION III - REFERENCE DATA

### 1. WORKING LIMITS

None

### 2. FUNCTIONAL DESIGNATIONS

#### Relays

FA - Fuse Alarm  
 FA1 - Auxiliary Fuse Alarm - 1st  
 FA2 - Auxiliary Fuse Alarm - 2nd  
 FA3 - Auxiliary Fuse Alarm - 3rd

#### Jacks

A or 48V - 48 Volt Battery  
 B - Spare  
 C or +130 - 130 Volt Battery  
 RC - Remote Control  
 SWMN - Switchmans talking line  
 TEL - Telephone

#### Lamps

FA - Fuse Alarm  
 FG - Fuse Guard

#### Keys

AR - Alarm Release

3. FUNCTIONS

- 3.1 To provide a visual and audible alarm when a fuse operates.
- 3.2 To make the Identifier Circuit busy when a fuse operates.
- 3.3 To provide battery and ground for testing purposes.
- 3.4 To provide a talking line between ANI frames.
- 3.5 To provide a remote control jack for the Outpulser Identifier Test Circuit.
- 3.6 To provide a spare jack for future requirements.

4. CONNECTING CIRCUITS

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

- 4.01 Identifier Circuit - SD-95810-01.
- 4.02 Secondary Network and Bus Connector Circuit - SD-95814-01.
- 4.03 Miscellaneous Circuit for Trouble Ticketer Frame - SD-95823-01.

- 4.04 Outpulser Identifier Test Circuit - SD-95815-01.
- 4.05 Floor Alarm Frame Fuse and Time Alarm Circuit (Crossbar No. 1) - SD-25046-01.
- 4.06 Floor Alarm Board Fuse and Time Alarm Circuit (Panel - BCO) - SD-21201-01.
- 4.07 Miscellaneous Alarm Circuit (Panel - GCO) - SD-20241-01\*.
- 4.08 Audible and Visual Alarm Circuit (Step-by-step No. 1) - SD-96188-01\*.
- 4.09 Pilot Lamp and Power Alarm Lamp Circuit (Step-by-step 350A) - SD-31573-01\*.
- 4.10 Miscellaneous Alarm Circuit Permanent Signal Timing Circuit (Step-by-step 355A) - SD-32192-01\*.
- 4.11 Local Frame Line Circuit (Crossbar No. 1 and Panel - BCO) - SD-96379-01.
- 4.12 Local Frame Line Circuit (Panel - GCO) - SD-20360-01.
- 4.13 Switchmans Talking Line Circuit (Step-by-step) - SD-32021-01.  
\*Typical Circuit

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DEPT. 2335-WLW-FBB-YE