

PANEL SYSTEM
MISCELLANEOUS ALARM CIRCUIT
MODIFICATION OF CIRCUITS PER ES-226189
TO PROVIDE AISLE PILOTS

CHANGES

B. CHANGES IN APPARATUS

B.1	Superseded	Superseded By
	6B Lamp or 8C Lamp	12C "A & M Only" or 13C

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 Fig. 21 is added.
- D.2 Note 112 is added.
- D.3 In Fig. 4 the (J) relay and the 48 positive alarm bar is added as dotted wiring to have circuit agree with ES-226189.
- D.4 In Fig. 5 lead "AC1" or "DC1" is added to connect to misc. alarms circuit.

All other headings under "Changes", no change.

1. PURPOSE OF CIRCUIT

- 1.1 To provide for furnishing aisle pilot alarms with sender selector equipment using miscellaneous alarm circuit ES-226189.

2. WORKING LIMITS

- 2.1 None.

3. FUNCTIONS

- 3.1 To cause operation of audible and visible aisle pilot signals when a trouble condition or operated fuse closes an alarm circuit.
- 3.2 To provide an alarm board night alarm which operates a ringer in unison with the aisle pilot ringer.

4. CONNECTING CIRCUITS

- 4.1 This circuit connects with miscellaneous alarm circuits as indicated on the drawing.

DESCRIPTION OF OPERATION

5. FRAME FUSE ALARMS (FIGS. 1, 2 & 3)

Operation of a frame fuse causes operation of the associated relay (A) which operates relay (A1), Fig. 5. When the operated fuse is removed, the alarms are retired.

6. MISC. FUSE BD. FUSE ALARM (FIG. 4)

Operation of any fuse on the fuse board operates the associated (A) or (+A) relay, which operates relay (A1), Fig. 5. When the operated fuse is removed, the alarms are retired.

7. CLOCK CIRCUIT FUSE ALARM (FIGS. 4A & 4B)

Operation of a fuse in a lead supplying interrupted battery to the group relays, operates the (CA) relay which operates relay (A1), shown in Fig. 5. When the operated fuse is removed, the alarms are retired.

8. FUSE ALARM AISLE PILOT LAMP (FIG. 5)

Operation of relay (A1) lights the aisle pilot lamp, operates the relay which closes the circuit of the aisle pilot audible alarm for the alarm group, lights the lamps, and operates the night alarms at the floor alarm board and at the main alarm board or trouble desk.

9. A-C AUDIBLE ALARM (FIG. 6)

This figure furnishes a lead for connecting to the audible alarm switching circuit and provides continuous ringing current for the aisle pilot audible alarms.

10. MACHINE RINGING CURRENT SUPPLY (FIG. 7)

This figure provides machine ringing current for the aisle pilot audible alarms.

11. FLOOR ALARM BOARD NIGHT ALARM (FIGS. 8, 8A & 8B)

When ground is connected to a lamp associated with lead "CR" or "TR", the corresponding relay operates. With key (NA) normal, operation of relay (CR) closes the circuit over lead "R" to operate the a-c auxiliary signal. When the audible alarm switching circuit is furnished, the auxiliary signal is controlled by relays in that circuit.

Operation of relay (TR) with key (NA) normal, causes relay (RT) to operate on machine ringing current and release on the silent periods, intermittently operating the a-c auxiliary signal.

12. SENDER PULSE FUSE ALARM SIGNAL (FIG. 9)

Operation of a sender pulse fuse connects ground to lead "PFI", operating relay (AI), shown in Fig. 5. When the operated fuse is removed and the sender pulse fuse alarm circuit release key is operated, the alarms are retired.

13. SELECTOR OR LINE FINDER TIME ALARM (FIG. 10)

When a selector fails to release within a predetermined time, the main alarm board or trouble desk lamp is lighted, the corresponding a-c audible alarm is operated, and relay (TA) operates, lighting the floor alarm board lamp and intermittently operating the aisle pilot audible alarm. When a line finder fails to release within a predetermined time, the main alarm board or trouble desk lamp is lighted, the corresponding d-c audible alarm is operated, and relay (TA) operates, lighting the floor alarm board lamp and operating the d-c audible alarm.

14. TEST FRAME ALARM (FIG. 11)

When an automatic test circuit fails to complete a test, on account of failure of itself or of the circuit under test, relay (TF) operates, operating relay (T) which lights lamp (T), lights lamp (TF) at the floor alarm board and intermittently operates the associated a-c auxiliary signal and aisle pilot audible alarm. Operation of relay (T) also lights lamp (TEST FRAME) and operates the a-c auxiliary signal at the main alarm board or trouble desk. When the test circuit restores to normal or proceeds with the test, relay (TF) releases, retiring the alarms.

15. INC. CALL SIGNAL LAMPS FOR CHIEF SWITCHMAN'S DESK AND O.G.T. TEST BD. (FIG. 12)

This figure provides connection to the floor alarm board night alarm and audible alarm switching circuit for incoming calls to chief switchman's desk and outgoing trunk test board.

16. INFORMATION DESK TRUNK ALARM (FIG. 13)

When the line relay of an incoming information trunk fails to release within a predetermined time interval, a relay operates to operate relay (TA2) and light the (TA) lamp and operate the intermittently ringing night alarm at the alarm board nearest the information desk relay rack.

Operation of relay (TA2) operates the aisle pilot audible alarm and lights lamp (TA) and operates the a-c auxiliary signal at the main alarm board or trouble desk.

17. INFORMATION DESK TOLL TRUNK ALARM (FIG. 14)

A trouble condition in the toll trunk or in the associated information desk start circuit operates a start circuit relay which operates relay (TT) and lights the (TG) lamp and operates the intermittent ringing night alarm at the alarm board nearest the information desk relay rack. Operation of relay (TT) operates the aisle pilot audible alarm and lights lamp (TG) and operates the a-c auxiliary signal at the main alarm board or trouble desk.

18. AISLE PILOT AUDIBLE ALARMS (FIGS. 15, 16, 17, 18, 19 & 20)

Relay (LF), (SF) or (F), when operated by application of ground to the corresponding lead "F", connects continuous ringing current to the associated subset. When ground is connected to lead "LT", "ST" or "T", the corresponding relay operates to connect machine ringing to the associated subset. If both relays of any figure are operated at the same time, the relay which is operated over the "F" lead opens the circuit for machine ringing current and connects continuous ringing current to the subset.

19. START CIRCUIT ALARM (FIG. 21)

If the start circuit fails to release within a predetermined length of time, the start circuit (KA) relay operates and is held operated by ground on the start circuit alarm release key. Operation of the (KA) relay operates relay (A1), Fig. 5, to light the aisle pilot lamp and to cause the audible alarms to sound in the usual way.

BELL TELEPHONE LABORATORIES, INC.

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