

PANEL SYSTEM
MISCELLANEOUS CIRCUIT
FOR INCOMING SELECTOR FRAMES

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 In Fig. 23, "No. 20BBE" is removed from the connection between the alarm bar and resistance (TF), and Misc. Alarm Ckt. is added to the connecting information, for lead F.

All other headings under "Changes", no change.

1. PURPOSE OF CIRCUIT

- 1.1 To provide fuse alarm, motor stop alarm, test battery and miscellaneous jacks for incoming selector frames.

2. WORKING LIMITS

- 2.1 None.

3. FUNCTIONS

- 3.1 To provide an alarm when a frame fuse operates.
- 3.2 To provide connections for the frame drive contacts to operate the motor stop alarm.
- 3.3 To provide test battery terminals.
- 3.4 To provide an alarm for ground on the all paths busy interrupter.
- 3.5 To provide miscellaneous jacks as specified on the drawing.
- 3.6 To provide a transmission battery filter.

4. CONNECTING CIRCUITS

- 4.1 Floor alarm board fuse and time alarm circuit.

- 4.2 Floor alarm board miscellaneous and auxiliary alarm circuit.
- 4.3 Floor alarm board motor alarm circuit.
- 4.4 Motor stop and frame busy circuit.
- 4.5 Frame line circuit.
- 4.6 Miscellaneous circuit for final selector frame.
- 4.7 Test line circuit for intercepting trunk finder.
- 4.8 Miscellaneous circuit for call distributing "B" switch-board link frame.
- 4.9 Miscellaneous circuit for intercepting trunk finder frame.
- 4.10 Miscellaneous circuit for "B" sender frame.
- 4.11 Miscellaneous circuit for "B" sender test frame.
- 4.12 Automatic test circuit for incoming selectors.
- 4.13 Miscellaneous circuit for miscellaneous interrupter frame.
- 4.14 Incoming selector circuit.

DESCRIPTION OF OPERATION

5. FUSE ALARM (FIGS. 1 & 2)

When the 15 ampere fuse opens, the associated 1-1/3 ampere fuse operates. Operation of any 1-1/3 ampere fuse on the fuse panel lights lamp (FA) and causes continuous operation of the minor alarms. When the operated 1-1/3 ampere fuse is removed, the alarms are retired. Operation of the fuse alarm causes operation of the (A1) relay, lighting lamp (FP).

6. MOTOR STOP (FIG. 3)

When the frame motor slows down or stops, frame drive contact "S" closes, causing continuous operation of the minor alarms. When the motor speed is again normal, if the alarm release key at the floor alarm board has been operated, closure of contact "R" again operates the alarm as a signal to restore the key.

7. FRAME LINE BETWEEN FRAMES (FIG. 4)

Communication may be established with the "A" switchboard by inserting the plug of an "A" board cord in the "A" board jack and plugging an operator telephone set into the (TEL) jacks. Communication may be established with the

sender make busy frame by operating the (TALK) key at the sender make busy frame and plugging an operator telephone set into the (TEL) jacks. Connection between two or more frames may be made by plugging operator telephone sets into the (TEL) jacks at the frames. Talking battery is supplied thru the connecting circuit. No signaling is provided.

8. FRAME TEST BATTERY (FIGS. 5 & 6)

One connecting block is furnished on each side of the frame to supply 24 volt battery, 48 volt battery, ground and ground thru 12,000 ohms resistance for testing purposes. Jack (A) furnishes battery for the portable test set.

9. TEST CIRCUIT RINGING CURRENT SUPPLY JACK (FIG. 7)

For testing ring-up relays, jack (B) may be patched to an incoming selector test set.

10. TEST LINE JACK AND SLEEVE RESISTANCE (FIGS. 8 & 9)

For testing incoming supervisory relays, the relay adjusting test set is connected to jack (C) by means of a patching cord. For ringing test, jack (C) is patched to jack (D), shown in Fig. 10. The resistance and battery for the sleeve circuit of the line which is connected to the test line jack, is furnished by Fig. 10.

11. BELL SET JACK TO TEST PARTY LINE RINGING (FIGS. 10 & 11)

Jack (D) may be patched to a test line jack, Fig. 8, to test ringing by the incoming selector. The subset which is furnished for offices with AC or AC-DC ringing is shown in Fig. 11.

12. SUPERIMPOSED SUBSETS (FIG. 12) (MFR. DISC.)

This figure provides subsets for use with Fig. 10 in offices with superimposed ringing.

13. TEST CIRCUIT PATCHING JACK (FIG. 13)

Jack (E) may be patched to the test jack of an incoming selector and corresponding jacks at the link frame or trunk finder frame may be patched to a test set so that calls may be originated at the link or trunk finder frame and the operation of the link or trunk finder circuit may be observed.

14. KEY INDICATOR OR KEY PULSING FRAME LINE (FIG. 14)

Telephone communication between the key indicator or key pulsing office and the incoming selector frame at the

panel office may be established over the subscriber line by means of a dial handset plugged into jack (J).

15. SUBSET FOR KEY INDICATOR OR KEY PULSING INC. FRAME LINE (FIG. 15)

Regular telephone service to the key indicator or key pulsing office is provided by this subset, which is connected to the subscriber line used by Fig. 14.

16. FRAME LINE TO "B" SUPV. (FIG. 16)

Before testing incoming selectors, a hand test telephone set is plugged into jack (F) and the code of the "B" supervisor is dialed. The supervisor is informed that tests are to be made on the selectors in that section and that, whenever a guard signal appears on a trunk which has not been assigned, the test line number is to be set up. This number will be the number of the final multiple test line or of the busy line, depending upon the kind of test to be made. At the conclusion of the tests on the selectors, the supervisor is informed that tests are completed and that guard signals should be handled in the regular manner.

17. SPARE JACK (FIG. 17)

Jack (G) is provided to meet possible future requirements for miscellaneous jacks.

18. REMOTE CONTROL LINE TO AUT. TEST FRAME (FIG. 18)

Jack (H) or (K) is connected to the automatic test circuit in such a manner that a test set may be plugged into the jack to control advance of the test circuit sequence switch so that functioning of the selector may be observed under test conditions.

19. RELAY TEST JACKS FOR TESTING T6 AND F21 RELAYS (FIG. 19)

When jacks (L) and (M) are connected by means of patching cords to jacks (3R) and (4W), respectively, of a 35-C test set, ground over lead M causes the interrupter to function and intermittently close and open the leads connected to tip and ring of each jack. These interruptions are used for testing T6 and F21 relays in the incoming circuit. When the energizing circuit of the relay is closed and opened at the speed of interruption supplied thru jack (L), the relay should operate and remain operated. When the circuit is closed and opened at the speed of interruption supplied thru jack (M), the relay should follow the interrupter.

20. SUPERIMPOSED SUBSETS (FIG. 20) (MFR. DISC.)

This figure provides subsets for use with Fig. 10 in offices with superimposed ringing.

21. ALL PATHS BUSY INT. ALARM (FIG. 21)

Relay (PB) operates and releases under control of the (PBI) interrupter if there is a trouble ground on the (PBI) lead. Each operation of relay (PB) lights lamp (PB) and causes operation of floor alarm board and aisle pilot alarms. When the trouble condition is removed, the alarms are retired.

22. SUPERIMPOSED RINGING SUBSETS (FIG. 22)

This figure provides subsets for use with Fig. 10 in offices with superimposed ringing.

23. FUSE ALARM AND TRANS. BAT. FILTER (FIG. 23)

This figure provides means for filtering 48 volt signal battery to produce talking battery for the incoming selector. Operation of a battery fuse, or a condenser fuse, operates the associated alarm type fuse, lighting lamp (TF) and causing operation of the major alarms. When the operated alarm type fuse is removed, the alarms are retired.

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