

PANEL SYSTEMS
MISCELLANEOUS CIRCUIT
FOR DECODER TEST FRAME

CHANGES

B. CHANGES IN APPARATUS

B.1	Superseded	Superseded By
Relay E654		Relay E199
(DR) 5AF Mes.)	(DR) 14K Mes.)	
Reg. or)	Reg. "X" Opt.)	Fig. 18
(DR) 12C Mes.)	(DR) 14LL Mes.)	
Reg.)	Reg. "W" Opt.)	
(L) E654 Re-		Fig. 13
lay)		

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The use of the E654 relay is rated Mfr. Disc. to show realistic rating for obsolescent apparatus.

D.2 The use of Fig. 13 is rated Mfr. Disc. and superseded by Fig. 18 which does not require an auxiliary relay.

D.3 Notes 115 and 116 are added.

D.4 Options "X" and "W" and Fig. 18 are added to the option used table.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

1.1 To provide alarms at the decoder test frame for the decoder test, decoder connector and decoder frames and to count each trouble release of the decoder.

2. WORKING LIMITS

2.1 None

3. FUNCTIONS

3.1 To give a visible signal at the decoder test frame and audible alarm at the trouble indicator frame and visible and audible alarms at the floor alarm board for an operated fuse at the decoder test frame, decoder frame or decoder connector frame, for an operated time alarm for decoder, decoder test circuit or decoder connector and for the stopping of the decoder test frame motor.

3.2 To record the number of times a decoder releases under trouble conditions.

4. CONNECTING CIRCUITS

- 4.01 Floor Alarm Board Fuse and Time Alarm Circuit - SD-21201-01.
- 4.02 Floor Alarm Board Motor-Alarm Circuit - SD-21202-01.
- 4.03 Miscellaneous Circuit for Trouble Indicator Frame - SD-21251-01.
- 4.04 Decoder Circuit - SD-21277-01.
- 4.05 Decoder Connector Circuit - SD-21187-01.
- 4.06 Automatic Testing Circuit for 3 Digit Decoders - SD-21188-01.
- 4.07 Miscellaneous Circuit for Decoder Frame - SD-21249-01.
- 4.08 Miscellaneous Circuit for Decoder Connector Frame - SD-21252-01.
- 4.09 Miscellaneous Alarm Circuit - ES-20241-01.
- 4.10 Floor Alarm Board Miscellaneous and Auxiliary Alarm Circuit - SD-21203-01.
- 4.11 Miscellaneous Circuit for Miscellaneous Interrupter Frame - SD-21666-01.
- 4.12 Automatic Test Circuit for Senders - SD-21186-01.
- 4.13 Alarm Transfer Circuit - SD-20733-01.

DESCRIPTION OF OPERATION

5. DECODER TEST FRAME FUSE ALARM
(FIG. 1)

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 operates relay (A), operating relay (TF) which lights lamp (FP), Fig. 3, lights lamp (TF), lights the floor alarm board lamp and operates relay (PB), Fig. 9; which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

6. DECODER TROUBLE RELEASE REGISTER (FIG. 2) (MFR. DISC.)

When ground is connected to lead MR by the decoder circuit, relay (L) operates and locks up until the contact of the register closes, insuring complete operation of the register. When the register is fully operated, relay (L) is short circuited and releases. If ground has been removed from lead MR, the register then releases.

7. FUSE ALARM AISLE PILOT LAMP (FIG. 3)

Lamp (FP) is lighted by operation of a decoder test circuit fuse, decoder fuse or decoder connector fuse.

8. DECODER CONNECTOR TIME ALARM (FIG. 4)

When the decoder connector grounds lead CT, relay (CT) operates, lighting the floor alarm board lamp which is lighted by a decoder time alarm, lighting lamp (CT) and operating the (PB) relay, Fig. 9, which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

9. TEST CIRCUIT TIME ALARM (FIG. 5)

When the test circuit connects ground to lead TA, relay (TT) operates to light a floor alarm board lamp, light lamp (TT) and operate the (PB) relay, Fig. 9, which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

10. DECODER FUSE ALARM (FIG. 6)

Operation of a decoder fuse operates relay (AB), operating relay (DF) which lights the (FP) lamp, Fig. 3, lights lamp (DF), lights a floor alarm board lamp and operates the (PB) relay, Fig. 9, which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

11. DECODER CONNECTOR FUSE ALARM (FIG. 7)

Operation of a decoder connector frame fuse operates relay (AD), operating relay (CF) which lights the (FP) lamp, Fig. 3, lights lamp (CF), lights a floor alarm board lamp and operates the (PB) relay, Fig. 9, which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

12. DECODER TIME ALARM (FIG. 8)

When a decoder connects ground to lead TAP, relay (DT) operates to light lamps (DT) and (TPD), light a lamp in the floor alarm board and operate the (PB) relay, Fig. 9, which operates a bell at the trouble indicator frame and operates the floor alarm board DC auxiliary signal under control of key (TR).

13. COMMON EQUIPMENT (FIG. 9)

Operation of any of the associated alarms operates relay (PB) which operates the decoder test frame bell, under control of interrupter contacts (Y) and (Y1), and causes operation of the floor alarm board DC auxiliary signal and lighting of floor pilot lamps under control of key (TR). The decoder test frame bell is also operated when ground is connected to lead A by the motor stop alarm.

14. UNATTENDED OFFICE OPERATION (FIG. 9)

Unattended operation is provided by option "Y". When the office is on unattended operation a key is operated in the alarm transfer circuit which transfers alarm to the distant office.

15. TROUBLE INDICATOR ALARM INTERRUPTER (FIG. 10)

Interrupters (T1) and (T2) open and close the circuit for operating the trouble indicator bell when single stroke operation of the bell is required by the trouble indicator alarms.

16. MOTOR STOP (FIG. 11)

When the frame motor slows down or stops, the "S" contact closes, operating a floor alarm board relay which lights lamp (MS), lights a lamp at the floor alarm board, operates the bell at the trouble indicator frame and causes operation of the floor alarm board DC auxiliary signal. When the (MS) key at the floor alarm board is operated, the alarms are retired and a guard lamp is lighted. When the motor again runs at normal speed, closure of contact "R" operates the floor alarm board relay, operating the alarms. When the floor alarm board (MS) key is released, the circuit returns to normal.

17. TEST FRAME ALARM AISLE PILOT LAMP (FIG. 12)

Operation of the test frame time alarm connects ground to lead TP, lighting lamp (TP).

18. DECODER TROUBLE RELEASE REGISTER
(FIG. 13)

When ground is connected to lead MR by the decoder circuit, relay (L) operates and locks up until the contact of the register closes, insuring complete operation of the register. When the register is fully operated, relay (L) is short circuited and releases. If ground has been removed from lead MR, the register then releases.

19. SENDER TEST CIRCUIT REMOTE CONTROL JACKS (FIG. 14, 15 & 16)

Each remote control jack is connected to a sender test circuit so that repeat tests may be made by means of a test set plugged into the jack.

20. ROUTE TRANSFER LAMP
(FIG. 17)

The (RT) lamp of Figure 17 is provided (one per decoder) to indicate when a route transfer has taken place. Figure 17 is only provided when the decoders are arranged for route transfer.

21. DECODER TROUBLE RELEASE REGISTER
(FIG. 18)

When ground is connected to lead MR by the decoder circuit, message register (DR) will operate. If ground has been removed from lead MR, the register (DR) then releases.

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DEPT. 3440-TJP-EWO-J2

20. ROUTE TRANSFER LAMP
(FIG. 17)

The (RT) lamp of Figure 17 is provided (one per decoder) to indicate when a route transfer has taken place. Figure 17 is only provided when the decoders are arranged for route transfer.

21. DECODER TROUBLE RELEASE REGISTER
(FIG. 18)

When ground is connected to lead MR by the decoder circuit, message register (DR) will operate. If ground has been removed from lead MR, the register (DR) then releases.

18. DECODER TROUBLE RELEASE REGISTER
(FIG. 18)

When ground is connected to lead MR by the decoder circuit, relay (L) operates and locks up until the contact of the register closes, insuring complete operation of the register. When the register is fully operated, relay (L) is short circuited and released. If ground has been removed from lead MR, the register then releases.

19. REMOTE TEST CIRCUIT REMOTE CONTROL JACKS (FIG. 19, 20 & 21)

Each remote control jack is connected to a remote test circuit so that tests may be made by means of a test set plugged into the jack.

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