

PANEL SYSTEMS
MISCELLANEOUS CIRCUIT
FOR TROUBLE INDICATOR FRAME
FOR USE WITH THREE DIGIT DECODER

CHANGES

A. CHANGES AND ADDED FUNCTIONS

A.1 Provision is made to provide multiple appearance of the (IT) lamp when the Intersender Timing Control feature (Fig. 9) is associated with a DSA switchboard.

B. CHANGES IN APPARATUS

B.1 Added

Fig. 9

(IT) R995 Relay J option.

(IT) KS-13491-L1-240 Resistance G option.

(IT) KS-13491-L1-620 Resistance H option.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 On figure 9 options are added to provide multiple appearance of the (IT) lamp when this figure is associated with a DSA switchboard.

D.2 On figure 10 the destination of lead AN is changed to read to Misc. Ckt. Sub. Dist. Frame. The destination of lead AN formerly read To Misc. Ckt. Sub. Dist. Frame of Motor Stop & Frame Busy Ckt.

D.3 Options G, H, J and K are added to the Figures and Options table on Sheet -011.

D.4 Circuit Note 118 is added.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2335-LJM-RJJ-KB

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CHANGES

B. CHANGES IN APPARATUS

B.1 Added

On issue 7-B of CD-21251-01, resistors (AN) and (AN) options "M" and "N" were shown as follows:

(AN) KS-13491 620W M option
(AN) KS-13491 240W N option

These resistors are now shown:

(AN) KS-13491 - L1 620W M option
(AN) KS-13491 - L1 240W N option

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The title of Fig. 10, Sheet-012 is changed to read: Fig. 10, Announcement Control, One per Sender Group.

All other headings, no change.

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PANEL SYSTEM
MISCELLANEOUS CIRCUIT
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CHANGES

A. CHANGES AND ADDED FUNCTIONS

A.1 Figures are added to provide lamp indications for all decoders busy (ADB) and all decoders busy alarm (DBA) when the timing control circuit for all decoders busy is furnished. A key (RLA) is added to provide release of the all decoder busy alarm.

A.2 A figure is added to provide a lamp (DB) to indicate that a decoder is busy. A key (BAT) is added to provide battery for this lamp.

B. CHANGES IN APPARATUS

B.1 Added

Fig. 11
(RLA) 576A Key

Fig. 12
(DBA) 2Y Lamp

Fig. 13
(ADB) 2Y Lamp

Fig. 14
(DB) 2Y Lamp

Fig. 15
(DBL) 552A Key

Fig. 10
(AN) KS-13491 620m M option
(AN) KS-13491 240m N option

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Figure 11 is added to provide a key (RLA) for all decoder busy alarm release.

D.2 Figure 12 is added to provide a lamp (DBA) to indicate that the all decoder busy alarm has operated.

D.3 Figure 13 is added to provide a lamp (ADB) to indicate that all decoders are busy.

D.4 Figure 14 is added to provide a lamp (DB) to indicate that a decoder is busy.

D.5 Figure 15 is added to provide a key (DBL) to control the (DB) lamp.

D.6 On Figure 10 leads ST and ST1 are shown connected to the Vacant Code or Overflow Trunks Circuit Arranged for Recorded Announcement.

D.7 Option T provides access to the alarm transfer circuit.

D.8 On Figure 10 options are shown to connect to the A switchboard auxiliary signal circuit.

D.9 Notes 113, 114, 115, 116 and 117 are added.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

1.1 To provide alarms and miscellaneous equipment for the trouble indicator frame.

2. WORKING LIMITS

2.1 None

3. FUNCTIONS

3.1 To provide miscellaneous jacks, test battery terminal blocks and fuse and time alarms for the trouble indicator and audible alarm for the decoder test frame.

3.2 To provide for transfer of alarms to a master office during unattended light load periods.

4. CONNECTING CIRCUITS

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

4.01 Miscellaneous circuits for decoder test frame - SD-21250-01.

4.02 Local frame line circuit - SD-96379-01.

4.03 Decoder circuit - SD-21277-01.

4.04 Trouble indicator circuit - SD-21197-01.

- 4.05 Floor alarm board circuit or floor alarm board fuse and time alarm circuit - SD-21201-01.
- 4.06 Alarm transfer circuit - SD-20733-01.
- 4.07 Sender load indicating circuit - SD-21942-01.
- 4.08 Miscellaneous circuits for subscriber district frame - SD-21221-01.
- 4.09 Motor stop and frame busy circuit - SD-20143-01.
- 4.10 Vacant code or overflow trunks circuit arranged for recorded announcement SD-96510-01.
- 4.11 Timing control circuit for all decoders busy - SD-25482-01.
- 4.12 Alarm Transfer Circuit - SD-20733-01.
- 4.13 "A" Switchboard Auxiliary Signal Circuit - SD-90464-01.

DESCRIPTION OF OPERATION

5. FUSE ALARM (FIGS. 1, 6 & 8)

Operation of the 15 ampere fuses operates the associated 1-1/3 ampere alarm type fuse. Operation of any 1-1/3 ampere fuse on the fuse panel lights lamp (FA) and causes the operation of (A) relay, lights the aisle pilot lamp, lights the fuse alarm lamp on the decoder test frame, causes operation of the audible alarm and causes operation of the floor alarm board alarms.

6. FRAME TEST BATTERY SUPPLY (FIGS. 2 & 7)

One connecting block is furnished on each side of the frame to supply 23-volt battery, 48-volt battery, ground and ground thru 12,000 ohms for testing purposes. Ground and 48-volt battery are connected to jack (A) into which the plug of a test set cord may be inserted.

7. FRAME LINE BETWEEN FRAMES (FIG. 3)

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 may be made between two or more frames by plugging operator telephone sets into the (TEL) jacks at these frames. Talking battery is supplied thru the connecting circuit. No signaling is provided.

8. TROUBLE INDICATOR ALARMS (FIG. 4)

8.1 Attended Operation ("X" Option)

Registration of one trouble on the trouble indicator connects ground to lead "TIL" and momentarily grounds lead "TIA". Ground on lead "TIL" operates bell (TI) under control of the interrupters. Ground on lead "TIA" operates relay (CA) and removal of the ground operates relay (CB) which lights lamp (TI) and causes operation of the floor alarm board alarms. A second trouble occurring before the first trouble has been cleared, again grounds lead "TIA" operating relay (TR) which locks up under control of relay (CA) and causes bell (TI) to operate as a vibrating bell. When ground is removed from lead "TIL", the circuit returns to normal.

8.2 Unattended Operation ("W" Option)

Registration of a trouble on the trouble indicator frame connects ground to lead "TIL" which operates a decoder alarm at the distant master office. During periods of unattended operation, the "TIA" lead is opened and performs no useful function.

9. SPARE JACK (FIG. 5)

This jack is provided to meet possible future requirements for miscellaneous jacks.

10. INTERSENDER TIMING JACK (FIG. 9)

The (IT) jack provides for activating the intersender timing feature in the associated group of subscriber senders independent of sender load conditions. A 322A or similar type plug inserted in the (IT) jack connects ground to the "IT" lead to the sender load indicating circuit operating the intersender timing control circuit. With intersender timing in effect the subscriber sender introduces a 3- to 6-second interval while waiting for senders ahead. If this interval expires before a distant sender is attached, the subscriber sender functions to set the district in the overflow position.

11. ANNOUNCEMENT CONTROL KEY (FIG. 10)

The (AN) key is a three position key which provides for automatic or manual operation of the announcement feature associated with intersender timing.

When intersender timing is in effect, ground, connected to the "AN" lead from the sender load indicating circuit is extended through the (AN) key in the "AUT" position to operate the (AN) relay. The (AN) relay operated;

- (a) locks to ground under control of the (AMR) key.
- (b) lights the (AN) lamp to indicate that the announcement feature is in effect.
- (c) closes a start circuit for the announcement machine.
- (d) connects ground to the "AN" lead to the miscellaneous circuit for subscriber district frame or the motor stop and frame busy circuit which causes the district circuit to be connected to an announcement source instead of overflow tone.

Operation of the (AN) key to the "MAN" position provides for setting the announcement feature in operation independent of sender load conditions.

Operation of the (AN) key to the "OFF" position prevents the sender load indicating circuit from setting the announcement feature in operation. To restore the announcement control circuit to normal, the (AN) key must be in the "AUT" or "OFF" position and the (AMR) key operated momentarily.

- 12. All Decoders Busy Alarm Release Key RLA (Fig. 11)

Lead AM locks the all decoders busy alarm

- 13. All Decoders Busy Alarm Lamp DBA (Fig. 12)

Indicates a continued all decoders busy condition until decoders become idle and the RLA key is operated.

- 14. The AMB Lamp Lights Whenever All Decoders Are Busy (Fig. 13)

- 15. Decoder Busy Lamp DB (Fig. 14)

The decoder busy lamp indicates that a decoder is busy on a service or test call, or that it is plugged busy. The battery for this lamp is under control of the DBL key of Fig. 15.

- 16. Lamp Control Key DBL For DB Lamp Fig. 15.

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