TOLL SYSTEMS
TOLL SWITCHBOARD NO. 1B, 3B, 3C, 3CF, 3CL, OR 5
TOLL TESTBOARD NO. 17B, 17C, OR 18B
TOLL TEST UNIT NO. 1A OR 3A
AUTOMATIC OUTGOING INTERTOLL TRUNK TEST FRAME
TANDEM PATCHING BAY
CIRCUIT PATCHING BAY
AUXILIARY SIGNAL AND
NIGHT ALARM CIRCUIT

CHANGES

B. CHANGES IN APPARATUS

B.1 Added

19 BM resistor (B), Fig. 12

Superseded	Superseded By
531A-3 subset (option T)	687A-3 subset with a 55A and a 56A gong (option N)
531A-3 subset with 41A gongs and 101A gong attachment (option P)	687A-3 subset with a 55A and a 58A gong (option M)

D. DESCRIPTION OF CIRCUIT CHANGES

D.01 Fig. 12 is added to provide resistance in the "F" lead of Fig. 8 for use with toll switching tandem trunks.

D.02 Fig. 8 is modified to provide for connection to Fig. 12.

D.03 Notes 104 and 107 and the "Options Used" table are revised to refer to Fig. 12.

D.04 The designation of the subset in Fig. 5 is changed from "SR" to "SA."

D.05 In Note 106 the word "Supervisor's" is replaced by "Service Assistant's."

D.06 Options M and N are added for the subset in Fig. 5.

D.07 Note 104 and the "Options Used" table are revised to refer to options M and N.

D.08 Note 112 is added to state usage of options M and N.

D.09 Note 111 is rated "Mfr. Disc."

D.10 Cabling Figs. 1K and 53 are changed.

D.11 In the Equipment Information column, ED's 60612-01, 55105-01, 64356-01, 92247-01, 92105-01, 92115-01, and J67447A-( ) are added. ED-55006-01 is added and lined out. ED-61706-01 is lined out. Short titles are added.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

1.1 This circuit provides audible and visual signal when a signal is received on an associated circuit.

2. WORKING LIMITS

2.1 None.

3. FUNCTIONS

3.1 Provides an audible signal when the (NA) key is operated and a signal is received in an associated circuit. Figs. 1, 2, 3, 4, 11, and 5 or Figs. 8, 3, 4, 5, and 11.

3.2 Provides an auxiliary signal when the signal is received in an associated circuit (Fig. 6 and 7).

3.3 Provides an auxiliary audible signal when a signal is received in an associated circuit (Figs. 4, 11, and 5).

3.4 Provides connection to service alarms when (SA) key is operated (Figs. 10 and 11) for use in locations other than switchboards.

4. CONNECTING CIRCUITS

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

4.01 Trunk Circuit such as SD-62614-01, SD-62187-01, SD-62438-01, SD-68097-01, SD-55348-01, SD-55222-01, and SD-56179-01.

4.02 Jack Circuit, SD-64545-01.

Printed in U.S.A.

11.2 Toll Testboard No. 5 Audible Signal to be Used

Ground from the contacts of relay (NA) or from lead "NA" is connected over lead "A" to the auxiliary signal circuit of toll testboard No. 5.

12. AUDIBLE SIGNAL FOR DSB CALLS

When the DSB calls waiting signal circuit functions to connect battery to the "B" lead, the buzzer (B) will sound.

13. AUDIBLE AND VISUAL ALARM WITH "SA" KEY FIG. 10

When an audible and visual signal, or service alarm is required, Key (SA) must be operated. Key (SA) operated, furnishes ground to the contacts of relay (SA). Relay (SA) operating on an incoming signal as described in Par. 5, (a) closes ground paths to operate relays in the audible and visual alarm circuit, (b) furnishes ground to operate relay (NB) and operate the (NA) bell.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2321-VWW-AAB-HL

4.03 Cord Circuit, SD-64737-01.

4.04 Telephone Order Wire Circuit, SD-55320-01.

4.05 Holding and Recall Circuit, SD-55036-01.

4.06 Service Assistants Telephone Circuit, SD-64743-01 and SD-55993-01.

4.07 Toll Testboard No. 5 Auxiliary Signal Circuit SD-63842-01.

4.08 Calls Waiting Signal Circuit SD-21758-01.

4.09 A Position Busy and Night Alarm Circuit SD-21139-01.

4.10 Audible and Visual Alarm Circuit SD-96188-01.

4.11 Automatic Outgoing Intertoll Trunk Test Frame - SD-68404-01.

DESCRIPTION OF OPERATION

5. AUDIBLE ALARM WITH NIGHT KEY

When an audible signal is desired, the night alarm key (NA) is operated, connecting relay (NB) to leads "B" and "NA" of Fig. 3. When a signal is received in an associated circuit, the ground is connected to lead "B" or "NA" causing the operation of relay (NB) or (SA). Relay (SA) operated operates (NB). The operation of the (NB) relay, operates the audible signal (NA). When ground is removed from lead "B" or "NA", relay (NB) or (SA) releases and the audible signal (NA) is silenced.

6. AUDIBLE ALARM WITHOUT NIGHT KEY

When a signal is received in an associated circuit such as a service assistant's circuit and an audible alarm is required as an auxiliary signal, ground is connected to lead "NB" which operates relay (NB). The operation of relay (NB) functions as described in Par. 5.

7. CIRCUIT ARRANGED TO CONNECT 24-VOLT BATTERY TO A1 LAMPS

When a signal is received by an associated circuit, 24-volt battery through a lamp is connected to the "A" or "E" or lead of Fig. 2, causing the operation of relay (NA). The operation of relay (NA) connects ground to relay (NB) or (SA) which functions as described in Par. 5.

8. CIRCUIT ARRANGED TO CONNECT DIRECT 24-VOLT BATTERY

When a signal is received by the associated circuit, direct 24-volt battery is connected to lead "F" of Fig. 1, which causes relay (NA) of Fig. 2 to operate and function as described in Par. 7.

9. CIRCUITS ARRANGED TO CONNECT 48-VOLT BATTERY

When a signal is received by an associated circuit, 48-volt battery through a 2Y lamp or through a 2G, A1, E1, or G2 lamp in series with a resistance, or through a resistance only is connected to lead "C" of Fig. 8 or lead "F" of Fig. 12 and then to lead "C" of Fig. 8, causing the operation of relay (NC). With key (NA) operated, relay (NC) connects ground to relay (NB) or (SA) which functions as described in Par. 5.

10. AUXILIARY SIGNALS FOR CIRCUIT ARRANGED TO CONNECT 24-VOLT BATTERY THROUGH A1 LAMPS

When a signal is received by the associated circuit, battery through a lamp is connected to lead "A" or "N", operating relay (A). The operation of relay (A) lights the (AUX) lamp and operates relay (NA). If the (NA) key is operated, relay (NB) or (SA) will operate and function as described in Par. 5.

11. CONNECTION WITH TOLL TESTBOARD NO. 5 AUXILIARY SIGNAL 6

11.1 Toll Testboard No. 17B Audible Signal to be Used

Ground from the auxiliary signal circuit of toll testboard No. 5 is connected over lead "NA", causing the audible signal of Fig. 5 to sound.