

STEP BY STEP SYSTEMS
NO. 1, 350A OR 355A
INTERCEPTING TRUNK CIRCUIT
FROM LOCAL SELECTOR MULTIPLE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 Connecting information is added at the "G" lead in Figs. 1 and 3 to the group and alarm relay circuit.
- D.2 Cross-connection Fig. 52 is added and Fig. 51 is changed.
- D.3 Note 203 is added.
- D.4 Reference to Note 203 is added to Note 201.
- D.5 In Note 101, the 1/2 amp. H.V. fuse was formerly 1/2 amp.
- D.6 ED-31058-01 is added to the equipment information.
- D.7 SD-31967-01 is added to the replacement information.

4. CONNECTING CIRCUITS

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

- 4.1 Local Selector Circuit - SD-31964-01.*
- 4.2 Trunk Finder Circuit - SD-31793-01.*
- 4.3 Miscellaneous Alarm Circuit - SD-31974-01.*
- 4.4 Ringing Interrupter Circuit - H-61154.*
- 4.5 Group and Alarm Relay Circuit - SD-32194-01.
- 4.6 Sleeve Repeating Trunk Circuit - SD-31421-01.*
- 4.7 A-B Toll Preceding Selector Circuit - SD-31241-01.*

*Typical

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2325-MAM-EWC-WA

CIRCUIT DESCRIPTION
SWITCHING SYSTEMS DEVELOPMENT DEPARTMENT

CD-31767-01
Issue 3-B
Appendix 2-B
Dwg. Issue 10-B

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CHANGES

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER
THAN THOSE APPLYING TO ADDED OR
REMOVED APPARATUS

C.1 Block and insulate information for
the (W) and (G) relays is changed.
Information for (W) relay was formerly only
insulate 3T(W) and for G relay was block
(C) No.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3310-GR-RLL-YP

STEP-BY-STEP SYSTEMS
NO. 1, 350A OR 355A
INTERCEPTING TRUNK CIRCUIT
FROM LOCAL SELECTOR MULTIPLE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D1 "N" and "M" wiring was added.
Formerly "N" wiring was part of
Fig. 3 and was not so designated.

D.2 Circuit notes 102 and 103 were
revised to include reference to
"N" and "M" options.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3310-NWB-RLL-WV

STEP-BY-STEP SYSTEMS
NO. 1, 350A OR 355A
INTERCEPTING TRUNK CIRCUIT
FROM LOCAL SELECTOR MULTIPLE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 Fig. 1. Rated "Mfr. Disc."
- D.2 Fig. 3. Added to replace fig. 1.
- D.3 Note 103 changed to show added option "T" Fig. 3.
- D.4 Option table changed to show added options.
- D.5 Note 102 changed to show application of added options.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

- 1.1 This circuit is for use in routing intercepted calls from a local selector multiple directly or through a trunk finder circuit to an intercepting trunk circuit.

2. WORKING LIMITS

- 2.1 Maximum subscribers loop 2500 ohms; minimum insulation resistance 15,000 ohms; maximum earth potential \pm 20 volts.

3. FUNCTIONS

- 3.1 With Fig. C or D to provide battery on the sleeve lead as an idle indication to battery hunting selectors.
- 3.2 To supply direct ground on the sleeve to the selector multiple to make this circuit busy and to hold preceding switches in the operating position.
- 3.3 To provide ground to insure that the ringing machine is operating where the ringing machine is on a stop start basis.
- 3.4 To supply machine ringing to cause the proper operation of the associated intercepting trunk circuit associated with the operator.
- 3.5 When used with the trunk finder circuit to cause the trunk finder to connect this trunk to the circuit associated with the operator.

- 3.6 To remove machine ringing from the tip and ring when the associated intercepting trunk circuit applies the tripping condition and then causes the tip and ring to be closed through.

- 3.7 With Fig. A or D to supply battery on the tip and ground on the ring outgoing the same as from a local call through a connector.

4. CONNECTING CIRCUITS

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

- 4.1 Local Selector Circuit - SD-31964-01*
 - 4.2 Trunk Finder Circuit - SD-31973-01*
 - 4.3 Intercepting Trunk Circuit - SD-31965-01*
 - 4.4 Miscellaneous Alarm Circuit - SD-32043-01*
 - 4.5 Ringing Interrupter Circuit - H-61154*
- *Typical

DESCRIPTION OF OPERATION

5. SEIZURE

- 5.1 Figs. 1 & 2 or 3 & 2 with Fig. B or C

When this circuit is seized by a selector the (L) relay operates, connecting ground to the sleeve lead making the circuit busy and holding preceding selectors operated and also operates the (S) relay. If this circuit is selected by a battery hunting selector, battery through the (A) resistance provides the condition to cause the selector to cut in on this terminal. The (S) relay operated supplies ground on the "MS" lead to insure that the ringing machine is operating, supplies an additional ground to the sleeve lead to the selector multiple as a make busy and holding condition and connects machine ringing through the primary winding of the (R) relay toward the trunk finder or intercepting trunk circuit. When this circuit is operated with a trunk finder circuit, the

operation of the (S) relay also operates the (G) relay. This connects ground to the "G" lead, causing a trunk finder to start and supplies battery through the (C) relay winding to the sleeve of the trunk finder multiple as an indication of the terminal for which the finder will be hunting. When the trunk finder has found this circuit the (C) relay operates, releasing the (G) relay which locks the (C) relay under control of the (S) relay, closes the (S) relay ground through to the line finder multiple and removes ground from the "G" lead to the line finder circuit. When the intercepting trunk circuit applies the tripping condition the (R) relay operates, removing machine ringing and closing through the talking circuit to the multiple.

5.2 Fig. A

The operation in this case is the same as described in paragraph 5.1 except that the (S) relay operated, operates the (W) relay and the (W) relay supplies the ground to insure that the ringing machine is operating instead of the (S) relay. Also after the (R) relay operates, battery and ground are supplied to the tip and ring respectively, as on a local call through a connector circuit.

5.3 Fig. D

Operation in this case is the same as above except this figure is used with battery hunting selectors. Battery through the (A) resistance provides the condition to cause the selector to cut in on this terminal.

6. DISCONNECT

6.1 Fig. 1 or 3 - With Fig. B or C
No Trunk Finders

When the calling subscriber disconnects, the (L) relay releases, in turn releasing the (S) relay. The (S) relay released, removes ground from the sleeve

lead releasing the (R) relay, restoring this circuit to normal and releasing the associated circuits.

6.2 Figs. 1 and 2 - With Fig. B or C
Trunk Finders

When the calling subscriber disconnects the (L) relay releases, in turn releasing the (S) relay. The (S) relay released, removes ground from the sleeve lead releasing the (C) and (R) relays, restoring this circuit to normal and releasing the associated circuits.

6.3 Figs. 2 and 3 - With Fig. B or C
Trunk Finders

When the calling subscriber disconnects, the (L) relay releases in turn releasing the (S) relay. The (S) relay released, disconnects the (C) and (R) relays from the sleeve lead and also removes ground from the sleeve lead. The (C) and (R) relays release, restoring the circuit to normal and releases the associated trunk finder circuit.

6.4 Fig. A

The operation in this case is the same as described in paragraph 6.1 and in addition the (S) relay released releases the (W) relay which is slightly slow in releasing. When it has released the sleeve is closed through so that if the associated finder on trunk circuit still has ground on the sleeve this circuit is made busy until the ground is removed, preventing reseizure at this time.

6.5 Fig. D

The operation in this case is the same as described in 6.3, except in addition the (S) relay released, releases the (W) relay which is slightly slow in releasing. This delays the application of battery on the sleeve lead to the local selector multiple, allowing any associated trunk finders to release.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3310-GR-RLL-BY