COMMON SYSTEMS
LINE AND BALANCING
REPEATING COIL AND COMPROMISE NETWORK CKT.
FOR USE WITH TRUNK AND LONG LINE CIRCUITS

CHANGES

B. CHANGES IN APPARATUS

B.1 Added Optionally

120CS Rep. Coil - Opt "N"
120DS Rep. Coil - Opt "M"
120ES Rep. Coil - Opt "K"
120FS Rep. Coil - Opt "J"
120GS Rep. Coil - Opt "G"

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Circuit note 121 is added.

D.2 The 120CS, 120DS, 120ES, 120FS and 120GS repeating coils are added to tables A, B and C.

D.3 Options "U", "S", "R", "Q", "P", "N", "M", "K", "J" and "G" are added to the options used table.

D.4 The 120CS, 120DS, 120ES, 120FS and 120GS repeating coils are added optionally to provide silicon steel coils when permalloy cored coils are not available.

D.5 Prior to this issue reference to "N" carrier was not shown in connecting information for T&R leads of Fig. 1.

E. CHANGES IN TRANSMISSION REQUIREMENTS

E.1 The 120CS, 120DS, 120ES, 120FS and 120GS repeating coils are added to the transmission test requirements table. All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3360-BSA-CGM-Z2

COMMON SYSTEMS
LINE AND BALANCING
REPEATING COIL AND COMPROMISE NETWORK CIRCUIT
FOR USE WITH TRUNK AND LONG LINE CIRCUITS

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Replacement note changed to read:
"Partially replacing SD-64222-01, SD-64249-01, SD-64280-01 and SD-64170-01."

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3350-SKV-FSE-EC

COMMON SYSTEMS
LINE AND BALANCING
REPEATING COIL AND COMPROMISE NETWORK CKT.
FOR USE WITH TRUNK AND LONG LINE CIRCUITS

CHANGES

B. CHANGES IN APPARATUS

B.1 Added (Optional).

1 - 120F Repeat Coil (Fig. 6)
1 - 120G Repeat Coil (Fig. 7)

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Figs. 6 and 7 and notes 119 and 120 are added.

D.2 Table C was formerly part of note 106.

D.3 The repeat coils used in Figs. 6 and 7 are added in the "Transmission Test Requirements."

D.4 Table B is added.

All other headings under Changes, No change.

1. PURPOSE OF CIRCUIT

1.1 This circuit provides a terminating arrangement for a 22 type telephone repeater associated with a trunk circuit arranged for CX signaling or dialing.

1.2 Provides a means of terminating a local trunk circuit which is in a different office than the repeating coil group which terminates the toll line or trunk.

1.3 Provides a means of terminating a trunk circuit associated with a non-phantomed circuit equipped with a "G" carrier system or a trunk circuit associated with a "G" carrier derived circuit of a phantom circuit.

1.4 Provides means of terminating a local trunk at the same office as the repeating coil group which terminates the toll line or trunk.

2. WORKING LIMITS

2.1 None.

3. FUNCTIONS

3.1 To terminate the line and net terminals of a 22 type telephone repeater associated with a trunk circuit arranged for CX signaling or dialing.

3.2 To terminate a local trunk circuit which is in a different office than the repeating coil group which terminates the toll line or trunk.

3.3 To terminate a trunk circuit at a non-repeatered point, associated with a non-phantomed circuit equipped with a "G" carrier system or the "G" carrier derived circuit of a phantomed circuit.

4. CONNECTING CIRCUITS

4.1 Incoming Trunk Circuits, SD-55082-01.

4.2 Outgoing Trunk Circuits, SD-55214-01.

4.3 Composite Set and Rept. Coil Circuit, SD-95004-01.

4.4 Application Schematic - 22 Type Tel. Repeater, SD-61040-03.

4.5 Compromise and Balancing Network Ckt., SD-90517-01.

4.6 "G" Carrier Application Schematic, SD-64089-01.

4.7 Intertoll Dialing Trunk Circuit, SD-64824-01.

DESCRIPTION OF OPERATION

5. FOR REPEATER ASSOCIATED WITH LOCAL TRUNK CIRCUIT NOT REQUIRED TO COMPLETE CALLS OVER ANOTHER TANDEM TRUNK

Fig. 1 is provided to terminate the line terminals of a 22 type telephone repeater associated with a local trunk circuit arranged for CX signaling or dialing and not required to complete calls over another tandem trunk. Fig. 1A is provided with Fig. 1 when the associated trunk circuit is a manual trunk circuit and is not equipped with 8A resistance lamps. Fig. 2 is provided as a compromise network to balance the local office impedance which is assumed to be 900 ohms.

6. FOR REPEATER ASSOCIATED WITH LOCAL TRUNK CIRCUIT WHICH IS REQUIRED TO COMPLETE CALLS OVER ANOTHER TANDEM TRUNK

Fig. 3 is provided to terminate the line and net terminals of a 22 type telephone repeater associated with a local trunk circuit where the trunk circuit is required to complete calls over another

tandem trunk. The repeating coil (L) is used to terminate the line terminals of the repeater and the trunk circuit. The repeating coil (N) is used to balance for the repeating coil (L) and the condenser (N) is used to balance for the condenser of the trunk circuit which connects to terminals 3 and 8 of the (L) repeating coil. To balance for the office impedance, and connected trunks when necessary, a compromise or balancing network should be provided.

7. FOR REPEATER ASSOCIATED WITH TOLL TRUNK CIRCUIT

Figs. 3, 3A and 3B are provided to terminate the line and net terminals of a 22 type telephone repeater in a toll office associated with a toll trunk circuit arranged for CX signaling and dialing. The repeating coil (L) of Fig. 3 and condenser (L) of Fig. 3A are used to terminate the line terminals of the repeater and the trunk circuit. The repeating coil (N) of Fig. 3 condensers (N), (CN) and (NBO), and resistances (CN) and (NBO) of Fig. 3B are used as a compromise network to balance the repeater when the circuit is in use. The repeating coil (N) and condenser (N) balance the repeating coil (L) and condenser (L). The resistance (CN) and condenser (CN) balance for the connected toll circuits while condenser (NBO) and resistance (NBO) balance for the toll office cabling. The leads R2, T2, R3 and T3 are provided as a means for the trunk circuit to short circuit the line and net terminals of the repeater so as to insure a satisfactory balance for the repeater when the circuit is not in use.

8. TRUNK CIRCUIT IN DIFFERENT OFFICE THAN TOLL LINE OR TRUNK TERMINATING REPEATING COIL GROUP

8.1 Fig. 1 is used to terminate a trunk at a different office than the repeating coil group terminating the toll line or trunk. When used for this condition the repeating coils are provided as per table (A).

8.2 Fig. 1A is provided with Fig. 1 when the associated trunk circuit is a manual trunk circuit equipped with 8A resistance lamps.

8.3 Fig. 6 or 7 is used to terminate a local trunk at the same office as the repeating coil group terminating the toll line or trunk. Provide repeating coils per table B.

9. TRUNK CIRCUIT ASSOCIATED WITH "G" CARRIER SYSTEM. NON-REPEATED POINT

Fig. 1 is used to terminate a trunk circuit, at a non-repeated point, associated with a non-phantomed circuit equipped with a "G" carrier system or the "G" carrier derived circuit of a phantomed circuit.

Fig. 1A is provided with Fig. 1 for this condition when the associated trunk circuit is a manual trunk circuit or a toll trunk circuit. Care should be taken to assure that the trunk circuit, when a local trunk circuit, is equipped with 8A resistance lamps when talking battery is provided.

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DEPT. 3350-RBH-FS-XB