CIRCUIT DESCRIPTION

CD-80728-01
ISSUE 1
APPENDIX 9D
DWG ISSUE 10D

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP BY STEP SYSTEM

CHANGES

D. Description of Circuit Changes

D.1 Fig. 11 is added.

D.2 Tables F and G are added.

D.3 References to Fig. 11 and Tables F and G are added in Fig. 2 and Note 101.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5154-CPK-CSK

CD-80728-01
Issue 1
Appendix 8-D
Dwg. Iss. 9-D

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP BY STEP SYSTEM

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Table E for Step-by-Step Dialing Office with CAMA and Note 213 were formerly not shown.

D.2 In Note 202 wire was formerly specified 20 ESCB.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

Dept. 5152-CPK-HHS-EG

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTION CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP BY STEP SYSTEM

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Table D for Step-by-Step ANI frames and Note 212 were formerly not shown.

D.2 In Note 101 (C) reference to Table D was added.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 5152-CPK-HHS-SF

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP-BY-STEP SYSTEM

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 To change Note 110 to make alarm fuse on separate supply.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Note 110 previously read: "Provide one Fig. 8 for a visual indication of alarm on the battery distributing fuse board. Provide one 1-1/3 amp. fuse from 48V on the battery distributing fuse board for supply "A".

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 5232-MTA-HHS-PT

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP-BY-STEP SYSTEM

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Table C was added.

D.2 Figs. 9 and 10 added.

D.3 In note 101(B) reference to Fig. 9 was added and in (C) reference to Fig. 10 and Table C added.

D.4 Note 211 added.

D.5 Table B was rated "A & M Only".

D.6 In Fig. 1 "to Fig. 2" was changed to Fig. 2 or 9.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 5232-CPK-CSK-WA

CIRCUIT DESCRIPTION
FACILITIES DEVELOPMENT DEPARTMENT

CD-80728-01
Issue 1
Appendix 4-D
Dwg. Issue 5-D

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP BY STEP SYSTEM

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Note 111 was not shown.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 5740-JLA-HTL-J2

CIRCUIT DESCRIPTION
SYSTEMS ENGINEERING DEPARTMENT

CD-80728-01
Issue 1
Appendix 3-D
Dwg. Issue 4-D

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP BY STEP SYSTEMS

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 301C plants were specified in title.

B. CHANGES IN APPARATUS

B.1 Added Fig. 8.

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DEPT. 5740-CSK-HTL-FI

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Fig. 8 and note 110 were not shown.

All other headings, no change.

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Issue 1
Appendix 2-D
Dwg. Issue 3-D

POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP-BY-STEP SYSTEM
301C PLANTS

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 No. 6 leads in table A were 4.

All other headings, No change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3250-CSK-HTL-EJ

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POWER SYSTEMS
300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
DECENTRALIZED POWER FILTERS
STEP-BY-STEP SYSTEM
301C PLANTS

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Note 101C formerly read "Provide Fig. 3 to 6 in accordance with Table A".

D.2 Notes 109 and 210 added.

D.3 Figure 7 added.

D.4 The voltage column added in Fig. A.

D.5 Table B added.

All other headings, No. Change.

BELL TELEPHONE LABORATORIES, INC.

DEPT 3250

LJP)
AEP) BV

POWER SYSTEMS
200 AND 300 TYPE PLANTS
BATTERY DISTRIBUTING CIRCUIT
GROUPING OF FRAMES AND RACKS
INDIVIDUAL POWER FILTERS
STEP-BY-STEP SYSTEM
301C PLANTS

1. PURPOSE OF CIRCUIT

1.1 This circuit shows the distribution of battery from the battery distributing fuse panel to various frames, fuse boards and racks in a step-by-step central office.

2. WORKING LIMITS

2.1 The battery voltage at the panels is as follows:

48 volts signal - 45-50 volts
48 volts talk - 45-50 volts
24 volts talk - 22-26 volts

3. FUNCTIONS

3.1 To distribute battery supply at the proper voltages for talking, and for operating switches, relays and other equipment used in the central office.

3.2 To protect the leads which are used to operate power supply from overload by fusing.

3.3 To cause alarms to sound and signals to be displayed in case of operation of the power supply fuses.

4. CONNECTING CIRCUITS

4.1 Power discharge fuses.

4.2 Switchboard circuits requiring power supply.

4.3 Filter circuits.

4.4 Alarm circuits.

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DESCRIPTION OF OPERATION

5. ALARMS

5.1 The fuses for distributing power to the frames, fuse boards and racks which constitute the central office equipment are mounted on panels. The panels are in turn located on a framework and the assembly termed a battery distributing fuse board. The battery distributing fuse board are located at strategic central points on the floor to offer the most economical distribution of power to the equipments.

5.2 The power is distributed by leads to the various frames which run on cable racks above the frames. These leads are tapped by drop leads which run to the fuse panels and motors on the frames.

5.3 The frames to which power is distributed consist of step-by-step frames which mount individual fuse panels for each frame when required and also mount motors for driving equipment when required. Power is also distributed to relay rack mounted equipment and to fuse boards.

6. OPERATION OF CIRCUIT

6.1 Provisions are made for 48 volt signal and talk battery supply, and 24 volt signal and talk battery supply. These various battery supplies are furnished to the individual battery distributing points as required. The filter for obtaining talk supply is shown on another circuit.

6.2 Each main battery distributing has an alarm fuse which operates inconnection with the main fuse. The alarm contact of the fuse furnishes battery through the protective resistances to cause an alarm to function and indicate both visually and audibly that a fuse in the battery distributing fuse panel is operated.

6.3 Figure 1 shows the power supply to the battery distributing fuse panel and the alarm protective resistances.

6.4 Figure 2 shows the main distributing fuse and associated alarm fuse.

6.5 Figures 3 to 6, incl., show the battery supply arrangements for furnishing battery and ground to the individual fuse panels on the frames, to fuse bays and fuse boards, and to relay racks.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 331

LJP)C
AEP)

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