CIRCUIT DESCRIPTION

CD-97102-01
ISSUE 3D
APPENDIX 2D
DWG ISSUE 16D
DISTN CODE 1N99

4

COMMON SYSTEMS
15 AMP
DECENTRALIZED FILTER CIRCUIT
FOR TALKING OR FILAMENT
BATTERY SUPPLY
ARRANGED FOR MOUNTING
FROM THE SUPERSTRUCTURE

CHANGES

D. Description of Changes

D.1 To facilitate procurement, the codes of diodes CR1 and CR2 were changed from 446F to 553F on a line-out basis.

D.2 As a cost reduction, the AL lead and its return (GRD) were changed from 20 Ga to 22 Ga.

D.3 In Equipment Note 202, the number of the BSP section which is specified was changed from A438.961 to the equivalent plant series 032-110-701.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 4222-DCW-WGS

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CHANGES

D. Description of Changes

D.1 In Fig. 1, N option was added to GRD lead.

D.2 Circuit Note 103 was added.

D.3 The record of figures, wiring and apparatus changes table was revised.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 4323-CET-JBS

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15 AMP
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FROM THE SUPERSTRUCTURE

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 This circuit provides means for obtaining filament or talking battery from 24- or 48-volt signal battery supplies.

SECTION II - DETAILED DESCRIPTION

1. GENERAL

1.01 The combination of the inductor coil and capacitor C1 will furnish sufficient attenuation to battery and induced lead noise to permit the use of signal battery supplies for talking or filament battery.

1.02 The L1 fuse is used to protect the lead from the power battery distributing circuit. The L2 fuse is an alarm-type fuse which is used to provide an alarm indication when the L1 fuse is blown.

1.03 Two alarm-type fuses, C1 and C2, are used in the supply lead to capacitor C1. These fuses are used to disconnect the capacitor from the circuit without blowing the main discharge fuse whenever capacitor C1 fails. Two fuses are used to lower the resistance in series with the capacitor. With fuses C1 and C2 removed, capacitor C1 will charge through resistor CH, which is used to limit charging current when the L1 and L2 fuses are placed initially.

1.04 The FLT ALM lamps indicate the operation of the C1, C2, or L1 fuse. Resistor R2, in series with lamp FLT ALM, Fig. 1 and Fig. 2, prevents possible equipment damage if a 2-type lamp is inserted into the 47B-type lamp socket in such a manner as to short the alarm bus to ground. The value of R2 is determined by the voltage supply option. Diode CR1, in the alarm lead, prevents lighting of the FLT ALM lamps when another alarm circuit operates. Diode CR2 prevents current from flowing from the C1 or C2 fuse to the L1 fuse when both have operated. Connection is made through resistor R1 and diode CR1 to a fuse alarm circuit associated with the office alarm system.

1.05 The filter panel is designated for mounting on the auxiliary framing at the top of the bay lineup. Lamp FLT ALM, per Fig. 1, is mounted on the panel and may not be readily seen from the CO main aisle. An auxiliary FLT ALM lamp, per Fig. 2, is provided for mounting in the equipment bay for which the filter is associated. An appropriate designation shall be provided (see drawing, Equipment Note 204).

1.06 A fuse alarm applique circuit, per Fig. 3, may be provided for No. 1 ESS and other offices arranged for loop closure-type alarm interconnections. The printed wiring board (PWB) assembly containing the AL relay need not be provided in offices not requiring loop closures.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

1.01 The fuse alarm applique circuit, per Fig. 3, consists of a PWB and an MA4A relay per ED-97428-30. The applique circuit is also used on the T1 order-wire panel per SD-97085-01.

Note: The decentralized filter circuit and the order-wire circuit are not meant to be connected together under any condition.

2. FUNCTIONS

2.01 Attenuates the battery and induced noise in the signal battery supply to provide filament or talking battery.

2.02 Provides fuses and indicating lamps for protection of power lead or filter capacitor.

3. CONNECTING CIRCUITS

3.01 No. 5 Crossbar Alarm Circuit - SD-25671-01

3.02 Distributing Fuse, Common Aisle and Miscellaneous Individual Alarm Circuit Such as SD-95072-01

SECTION IV - REASONS FOR REISSUE

CHANGES

D. Description of Changes

D.1 In Fig. 1 and 2, the codes of lamp FLT ALM are changed from 2U (G option) to A3, and 2F (H option) was changed to J2 on a line-out basis because of the 2U and 2F lamp codes being rated A&M Only.

D.2 In Fig. 1, leads AL or MN and GRD were changed to paired leads.

D.3 Fig. 3 was rerated from Special to AT&Tco Standard.

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