POWER SYSTEMS
800 TYPE PLANTS
RINGING CIRCUIT
SUPERIMPOSING AND TRIPPING BATTERIES
806E & 806F RINGING POWER PLANTS

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 This circuit has been arranged for use with a DC to DC transistor converter for providing the superimposing and tripping voltage.

A.2 Optional alarm fuse provided in Fig. 1.

B. CHANGES IN APPARATUS

B.1 Added

70F fuses and associated 10 Ω current limiting resistors as "S" option in Fig. 1.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Fig. 1 rated "MFR DISC."

D.2 70F fuses, namely +BAT 1-A and +BAT 2-A, added to Fig. 1 for purpose of issuing a fuse alarm when either +BAT 1 or +BAT 2 fuse blows. The current limiting resistors are required to insure against false fuse alarms.

D.3 Fig. 2 rated "A&M ONLY"

D.4 Fig. 4 rated "MFR DISC."

D.5 Figs. 5, 6, 54 and 55 added to provide distribution and alarms for #5 crossbar and 355A dial offices.

D.6 Fig. 53 rated "MFR DISC."

D.7 Fig. 51 rated "A&M ONLY"

D.8 Note 103 rated "MFR DISC."

D.9 Circuit description revised to include addition of +BAT alarm fuses.

1. PURPOSE OF CIRCUIT

1.1 To provide positive superimposing and tripping voltage for superimposed ringing.

1.2 To provide positive and negative trip fuses for switch frame circuits.

1.3 To provide ringing supply fuses for long line circuits.

2. WORKING LIMITS

2.1 45 to 52 Volts D-C.

3. FUNCTIONS

3.1 To provide positive superimposing and tripping voltage for superimposed ringing.

3.2 To provide positive and negative trip supply for switch frame circuits.

3.3 To provide for furnishing SUP + AUD (94 to 101V) and SUP - AUD (94 to 101V) to long line circuits, with fuses for 356A dial offices.

3.4 To provide fuse alarms and a superimposed positive no-voltage alarm.

4. CONNECTING CIRCUITS

This circuit was originally designed to connect to the following circuits.

4.1 SD-81131-01, Ringing Circuit, AC-DC or Superimposed Ringing, 806E Plant.

4.2 SD-81225-01, Ringing Circuit, AC-DC or Superimposed Ringing, 806F Plant.

4.3 SD-95435-01, Long Line Circuit.

4.4 Switch Frame Circuits requiring Tripping Supply.

4.5 SD-81571-01, 610D Power Plant.

DESCRIPTION OF OPERATION

5. SUPERIMPOSING AND TRIPPING BATTERIES, TEST AND ALARM FIGS. 1, 4, 5 & 6.

5.1 General

Two sets of positive 45 to 52 volt batteries are provided. As the ringing supply to which this battery is connected has separate windings for positive and negative superimposed ringing the same battery serves for both a superimposing battery and a tripping battery. Either set of batteries may be used in the circuit by selecting the position of the (+BAT) key. The batteries not in circuit are tested by connecting a voltmeter to the (VM) pin jacks, operating the (TST) key to the proper position and then holding the (LOAD) key operated in accordance with Note 103 and reading the voltmeter.

5.2 Fuses

1/2 or 3/4 Ampere fuses are provided to furnish +TRP and -TRP to the switch frame circuits. The -TRP fuse furnishes central office battery from the ringing circuit. A 1/2 ampere fusetron is connected in series with each battery. The reason for using fusetrons is that these are in series with 1/2 ampere fuses elsewhere in the circuit.

In case of failure of the 20 cycle supply connected to the positive superimposing and tripping voltage supply the (PV) relay will release. The contacts of this relay are in series with contacts of other no-voltage alarm relays in the main ringing circuit (SD-81131-01 or SD-81225-01) and the release of any one of the no-voltage alarm relays will remove a shunting ground from the (RP) relay in that circuit causing it to operate and bring in a major alarm. If either the (-TRP) or (+TRP) fuses blow the (TA) relay will be operated, lighting the (TRP) lamp and bringing in a major alarm over the PG lead.

6. 94 to 101 VOLT SUPPLY LONG LINES RINGING FUSES AND ALARM FIG. 2 - 356A DIAL OFFICE

Fig. 2 provides fuses for furnishing SUP + AUD (94 to 101V) and SUP - AUD (94 to 101V) for long line circuits in 356A dial offices. It is furnished as a part of this circuit as this supply is required only when superimposed ringing is furnished. In case either fuse blows the (SA) relay will be operated. The contacts of the (SA) relay are in series with the contacts of the (PV) relay in Fig. 1 and bring in a major alarm through the main ringing circuits as described under paragraph 5.3 for the (PV) relay

7. 94 to 101V VOLT SUPPLY FOR LONG LINES CIRCUIT FIG. 3 - 355A DIAL OFFICE

Fig. 3 provides SUP + AUD (94 to 101V) and SUP - AUD (94 to 101V) for long line circuits in 355A dial offices. Fuses and fuse alarm are not required in this case as they are furnished in the switch frame equipment.

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DEPT 5154-FPZ-CSK