

P.M.B.X. No.4
 APPARATUS PARTICULARS AND
 EXPLANATORY CIRCUITS

N2233
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APPARATUS SCHEDULE

1. SWITCHBOARD P.M.B.X. No.4/1A (DGM. SA 7601)

ITEM	RATE BOOK TITLE
Key Handles	Handles Key No.18/15
Lamps	Lamps No.2 45V
Cord Circuit Keys	Key No.1106
Ring Ans/Couple Key	▪ No.1001
Alarm Cut-off Key	▪ No.1302
Night Service Key	▪ No.1901
Cord Circuit Lamp Lens	Cap Lamp No.85A Opal
Cords	Cords, Switchboard No.391....
Plugs	Plugs, Switchboard No.321 Grey
Pulley Weights	Weights, Pulley No.19A
Cord Circuit Lamp Jack	Jack Lamp No.57A
Operator's Jacks	Jacks No.84A Grey MK 1
Notice Frame (Fitted)	Frames Notice No.38A
V.I.F. (When required)	Frames Notice No.25 Grey
Dial	Dial Auto No.21 LA Grey
Dial Mounting (Plug-in Portion)	Mtg. Dial, Auto No.22A(Incomplete)
Dial Mounting (Complete)	Mtg. Dial, Auto No.22A
Dial Plate (For Dial Mtg.)	Plate Mounting No.5B
Dial Plate(When no Dial Fitted)	Plate Mounting No.5A
Pilot Lamp Jack	Jack Lamp No.57A
Pilot Lamp Lens	Cap Lamp No.79A Opal
Designation Strip	Strip Designation No.47A
Face Panel Labels:-	
Right Hand (Undesignated)	Label No.461A
Left Hand (Non-Multiple)	▪ No.461B
Left Hand (Multiple)	▪ No.461C
Centre (Non-Multiple)	▪ No.461D
Centre (Multiple)	▪ No.461E
Extension Jack (10 Ccts.)	Jack No.710 BR
Extension Lamp Cover (10 Lamps)	Cover Lamp No.8/10A
Extension Lamp Jack (10 Ccts.)	Jack Lamp No.61/10A
Extension Lamp Lens:-	
Numbered: 0-9	Kit No.133/0
▪ 10-19	▪ No.133/1
▪ 20-29	▪ No.133/2
▪ 30-39	▪ No.133/3
▪ 40-49	▪ No.133/4
▪ 50-59	▪ No.133/5
▪ 60-69	▪ No.133/6
▪ 70-79	▪ No.133/7
▪ 80-89	▪ No.133/8
▪ 90-99	▪ No.133/9
▪ 100-109	▪ No.133/10
▪ 110-119	▪ No.133/11
▪ 120-129	▪ No.133/12
▪ 130-139	▪ No.133/13

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PAPER:W
 CIRC'L TN:
 GENERAL

1. (Contd.) SWITCHBOARD P.M.B.X. No.4/1A

ITEM	RATE	BOOK	TITLE
Numbered: 140-149	Kit No.133/14		
" 150-159	" No.133/15		
" 160-169	" No.133/16		
" 170-179	" No.133/17		
" 180-189	" No.133/18		
" 190-199	" No.133/19		
Concentrator Blocks (6x10 Tags)	Strip Connexion No.191A		
Exchange Line Jack (10 Ccts.)	Jack No.710 BR		
Exchange Lamp Jack (20 Lamps)	Jack Lamp No.61/20A		
Exchange Lamp Cover (For 20 Lamps)	Cover Lamp No.8/20A		
Exchange Lamp Lens	Caps Lamp No.76A Opal		
Inter-PBX Jack (5 Ccts.)	Jack No.505 BS.		
Inter-PBX Lamp Jack (5 Ccts.)	Jack Lamp No.61/6A		
Inter-PBX Lamp Cover	Cover Lamp No.8/10A		
Inter-PBX Lamp Lens	Caps Lamp No.76A Opal		
Dummy Lens	Caps Lamp No.76A Light Grey		
Single Lamp Jack	Part No. 1/DJA/13		
Dummy Jack	Part No. 1/DJA/12		
Cord Test "A" Jack	Jack No.300 B7		
Cord Test "B" Jack	" No.300 B7		
Ring Test Jack	" No.300 B7		
Night Transfer Jack	" No.300 B7		
Hold Jack	" No.300 B7		
Power Fail Jack	" No.1000 B8		
Pegs for Spare Jacks	Pegs No.15 Grey		
Ticket Clip	Ticket Clip No.18A		
Meter Window	Part No. 1/DWI/87		
Meter Dummies	Meter Dummy No.8		
Keypate (Normal)	Part No. 1/DFA/15		
Keypate (For Metering)	Part No. 2/DFA/15		
FA1, FA2, FA3 Lamp Jacks	Part No.1/DJA/13		
Power Alarm Lamp Jacks	Part No.1/DJA/13		
Ring Test Neon	Lamp No.36A		
Resistors R1 (Extn. Sleeve)	Resistor Oxide No.2B 510 Ω		
" R2 (Dial Spark Quench)	" Spool No.6/2 100 Ω		
" R3 (Ring Test Sleeve)	" Coil No.35A 510 Ω		
" R4 (N/S Key Spark Quench)	" Spool No.6/2 10 Ω		
" R5 (Cord Test "A")	" Coil No.35A 910 Ω		
" R6 (Ring Test)	" Carbon No.16 GD 5-1K		
" R7 (Ops Cct. Wetting)	" Carbon No.16 GD 10K		
" R8 (Night Transfer)	" Carbon No.16 GD 33K		
" R9 (Res. Batt.Charge)	" Coil No.12A 400 Ω		
Rectifiers MR 1-5	CV 8308		
Rectifier MR 6	Rectifier Element No.205		

1. (Contd.) Switchboard P.M.B.X. No.4/1A

ITEM	RATE BOOK TITLE
Key Dummies	Key-Dummy No.5, Light Grey
Battery Jack	Jack No.200 B6/N
Buzzer	Buzzer No.33A
Buzzer Clip	Clip No.91A
$\frac{1}{2}$ " Spacer	Strip Spacing No.6A
1" Spacer	" " No.6B
$1\frac{1}{2}$ " Spacer	" " No.6D
2" Spacer	" " No.6E
$2\frac{1}{2}$ " Spacer	" " No.6F
Capacitor C1 (Dial Spark Quench)	Capacitor MC 102C
Capacitor C2 (N/S Key Spark Quench)	2 Capacitors MC 103C
Fillet between Positions	
Key Shelves	Part No. 1/DST/586
Dial Dust Cover	Part No.1/DCO/631

2. CORD CIRCUIT (DGM. SA 7602)

Retard RA, RC	Relay No.3404
Relay LA, LC	" No.16803
" SA	" No.16798
" SC	" No.16793
" SK	" No.3265
" H	" No.16801
" X	" No.16794
" TS	" No.16948
" F	" No.11562
Resistor R1	Resistor Coil No.35 10 Ω
" R2	" " No.35 10 Ω
" R3	" " No.35A 150 Ω
" R4	" " No.36 100 Ω
" R5	" " No.36 300 Ω
" R6	" " No.36 300 Ω
" R7	" " No.40 1000 Ω
" R8	" " No.35A 2K
Capacitor C1	Capacitor MC 102C 2 μ F
" C2	" MC 102C 2 μ F
Capacitor C3	" Electrolytic No.3147 100 μ F
Rectifier MR1 & MR2	CV 8308
" MR3	Rectifier Element No.4/6AZ
" MR4	" " No.1/6AZ

3. EXCHANGE LINE CIRCUIT (DGM. SA 7603)

Relay AC	RELAY No.5398
" CT	" No.16797
" D	" No.16791
" FLS	" No.4394
" LL	" No.16802

3. (Contd.) Exchange Line Circuit

Relay LR	Relay No.16795
Resistor R1	Resistor Coil No.35 10 Ω
" R2	" No.35 10 Ω
" R3	" No.36 300 Ω
" R4	" No.40 620 Ω
" R5	" No.35A 1K
Capacitor C1	Capacitor MC No.102C 2 μ F
" C2	" MC No.102C 2 μ F
" C3	" MC No.102C 2 μ F
Rectifier MR1	Rectifier Element No.1/12AZ

4. OPERATORS AND MISCELLANEOUS CIRCUITS RELAY SET (DGM. SA 7604)

Relays PA & PB	Relay No.15005
" MC	" No.16804
" G	" No.16800
" MF	" No.16799
" TC	" No.8453
Retard IA, IB & IC	Coil Retardation No.8454
Resistor R1	Resistor Coil No.35A 30 Ω
" R2	" No.35A 30 Ω
" R3	" No.35A 30 Ω
" R4	" No.35A 30 Ω
" R5	" Carbon No.26KC 330 Ω
" R6	" Coil No.40 560 Ω
" R7	" Carbon No.26KC 1.2K
" R8	" Carbon No.15FD 4.3K
" R9	" Coil No.40 5.6K
" R10	" Carbon No.16GD 39K
" R11	" Carbon No.16GD 47K
Capacitor C1	Capacitor No.8001 0.25 μ F
" C2	" MC No.102C 2 μ F
Capacitors C3 & C4	Capacitors Electro. No.3147 100 μ F
Capacitor C5	Capacitor MC No.103C 4 μ F
Transformer T1	Transformer No.3/481A-1
Transformer T2	Transformer No.3/480A
Inductor L1	Inductor Coil No.192A (Part of Transformer T2)

5. ENGAGED TEST CIRCUIT (DGM. SA 7605)

Transistor VT 1	CV 7345
Resistor R1	Resistor Carbon No.26KC 150 Ω
" R2	" No.26KC 5.6K
" R3	" No.26KC 10K
" R4	" No.26KC 10K
" R5	" No.26KC 18K
" R6	" No.26KC 22K
" R7	" No.26KC 33K

5. (Contd.) Engaged Test Circuit

Capacitor C1	Capacitor No.8005	0.5 μ F
Rectifier MR1	CV 8308	

6. AUDIBLE CLEAR CIRCUIT (DGM. SA 7606)

Relay AA	Relay No.16790	
Transistor VT1	CV 7376	
Resistor R1	Resistor Carbon No.16GD	7.5K
" R2	" No.16GD	20K
Rectifiers MR1-16	CV 8308	
Rectifier MR17	CV 7102	

7. SIDE-TONE SUPPRESSION CIRCUIT (DGM. SA 7609)

Transistor VT1	CV 7437	
" VT2	CV 7342	
Resistor R1	Resistor Carbon No.15FD	240 Ω
" R2	" No.16GD	750 Ω
" R3	" No.26KC	1K
" R4	" Coil No.40	1K
" R5	" Carbon No.16GD	2K
" R6	" No.16GD	3-9K
" R7	" No.26KC	10K
" R8	" No.16GD	16K
Capacitor C1	Capacitor No.4501B	1 μ F 35V
" C2	" " "	1 μ F 35V
" C3	" " "	100 μ F 20V
" C4	" " "	100 μ F 20V
" C5	" " "	100 μ F 10V
" C6	" " "	100 μ F 10V
Rectifiers MR1 & 2	CV 7127	

EXPLANATORY CIRCUITS

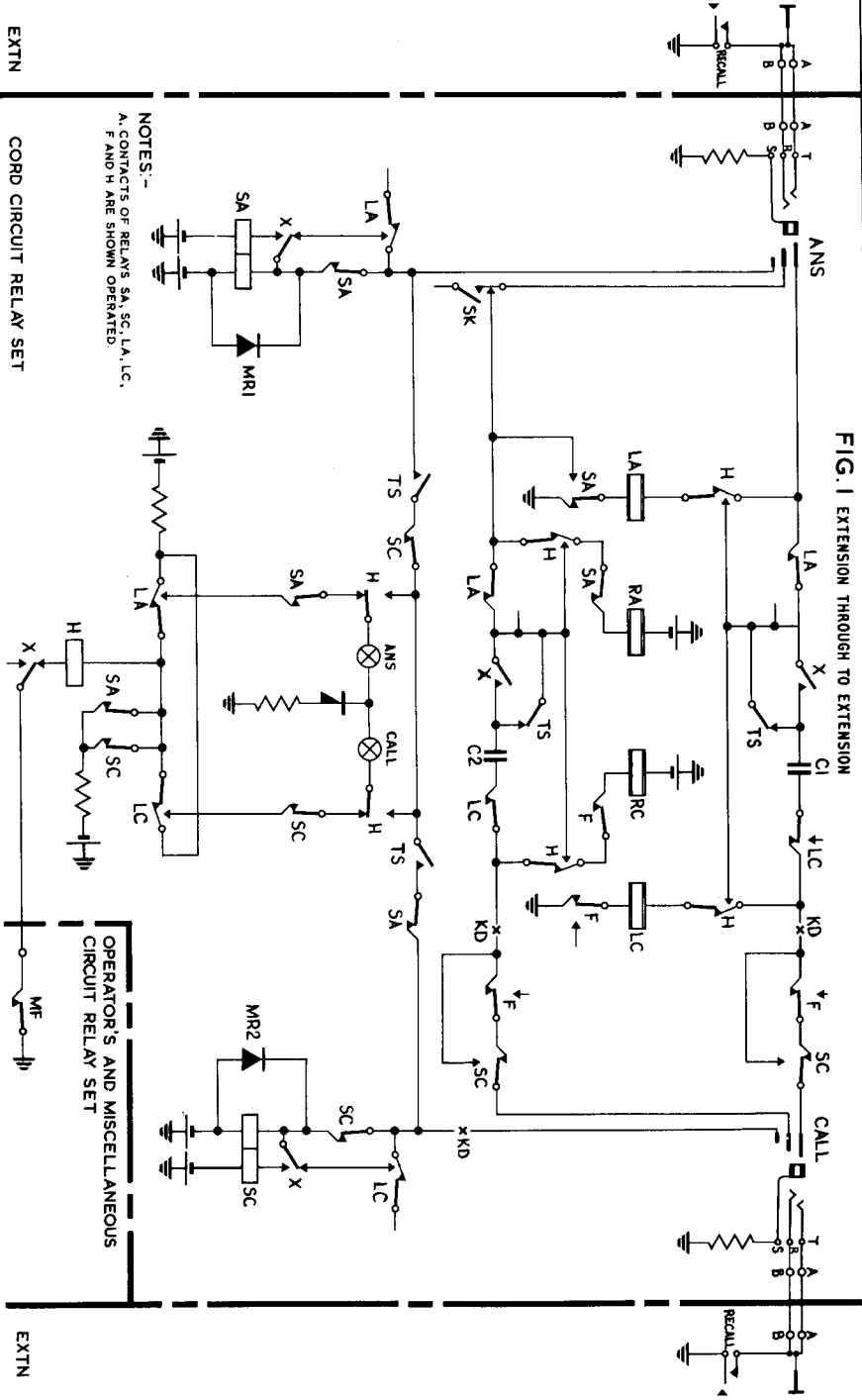


FIG. 1 EXTENSION THROUGH TO EXTENSION

NOTES:-

A, CONTACTS OF RELAYS SA, SC, LA, LC,
F AND H ARE SHOWN OPERATED.

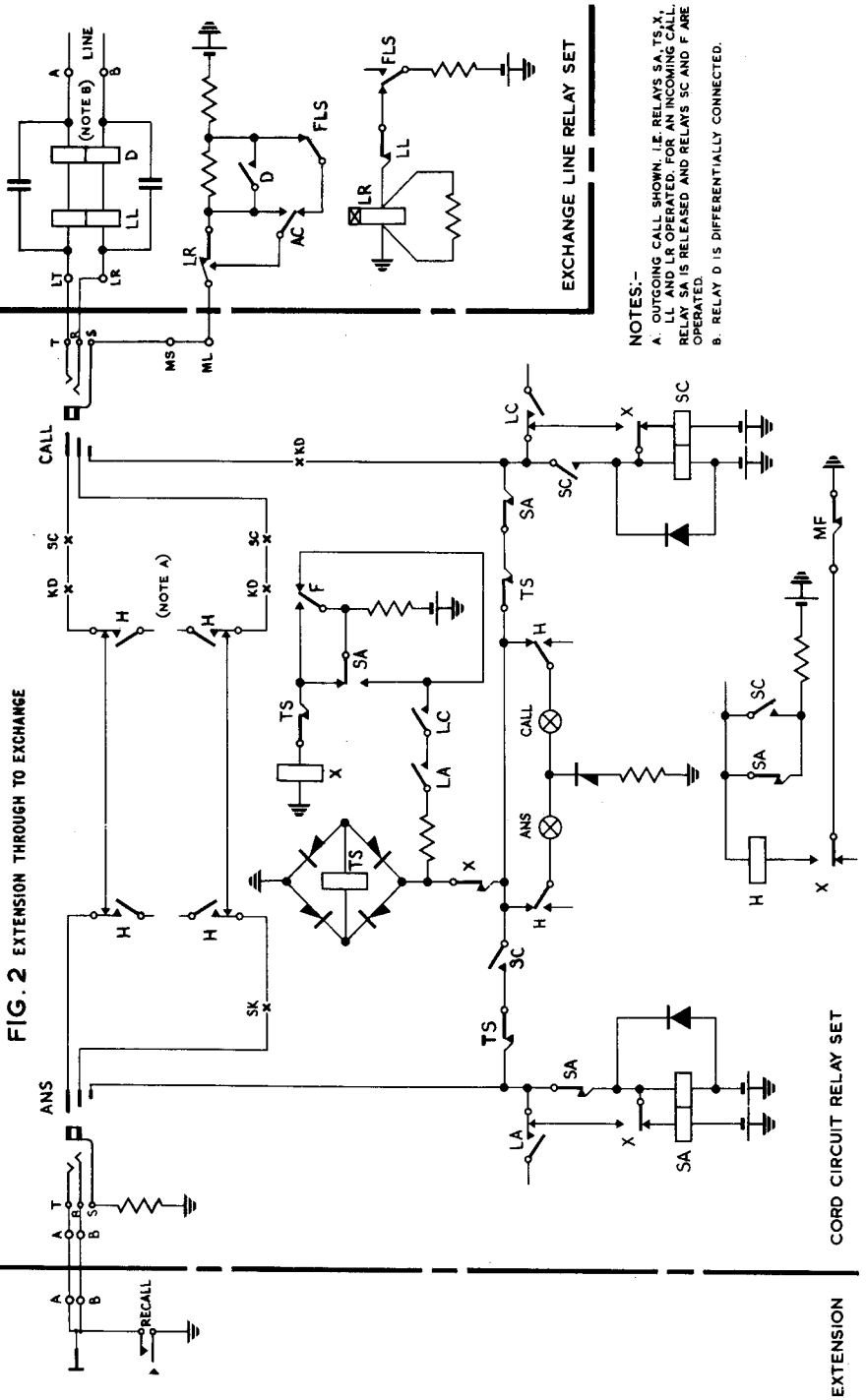
EXTN

CORD CIRCUIT RELAY SET

OPERATOR'S AND MISCELLANEOUS
CIRCUIT RELAY SET

EXTN

FIG. 2 EXTENSION THROUGH TO EXCHANGE



NOTES:-

- A. OUTGOING CALL SHOWN, I.E. RELAYS SA, TS, X, LL AND LR OPERATED. FOR AN INCOMING CALL, RELAYS LR, ANS IS RELEASED AND RELAYS SC AND F ARE OPERATED.
- B. RELAY D IS DIFFERENTIALLY CONNECTED.

EXTENSION

CORD CIRCUIT RELAY SET

EXCHANGE LINE RELAY SET

FIG. 3 EXTENSION MULTIPLE CONNEXIONS

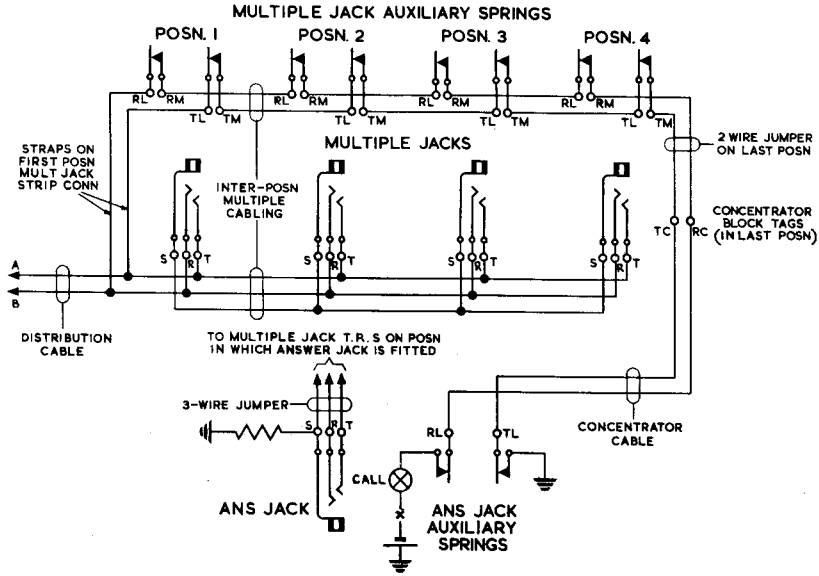
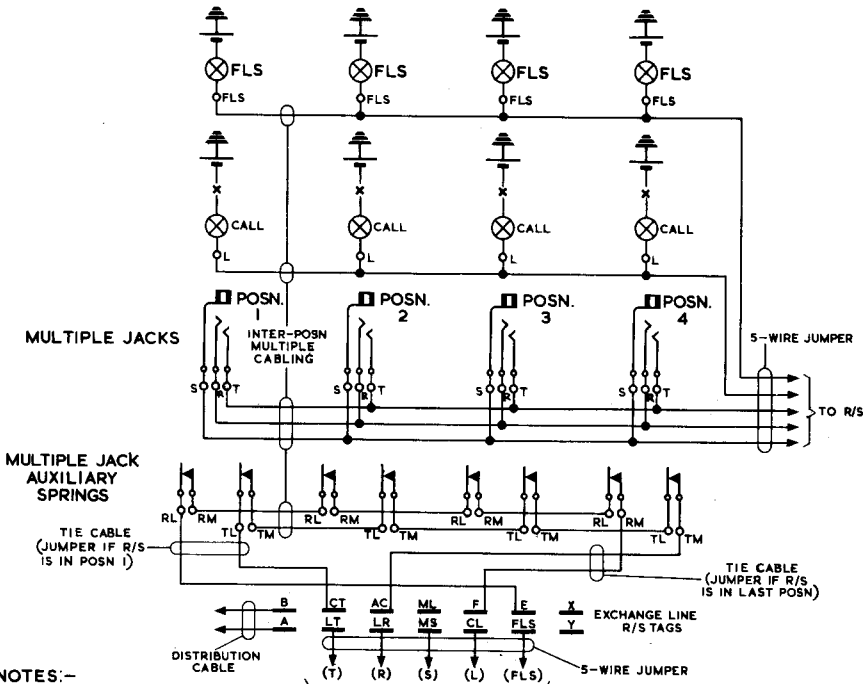


FIG. 4 EXCHANGE LINE MULTIPLE CONNEXIONS

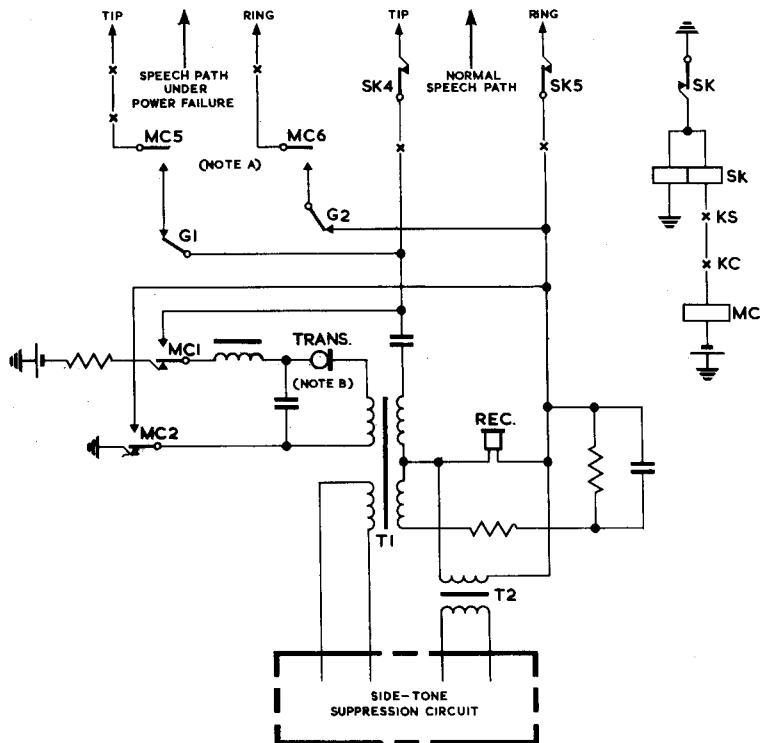


NOTES:-

A. THE MULTIPLE JACKS AND ANSWER JACK AUXILIARY SPRINGS ARE OPERATED (BROKEN) WHEN A PLUG IS INSERTED.

TO MULTIPLE JACK STRIP CONN IN POSN IN WHICH R/S IS FITTED

FIG.5 CONNEXION OF OPERATOR'S CIRCUIT



NOTES:-

- A. CONTACTS OF RELAYS MC AND SK ARE SHOWN OPERATED.
- B. THE TRANSMITTER IS ENERGIZED FROM THE EXCHANGE (VIA MC1 AND MC2 RELEASED) UNDER POWER FAILURE OPERATION.

P.O.E.D.
S BCH.

PAPER:-W
CIRCULATION:-
GENERAL

ISSUE

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