

**TERMINATION OF PRIVATE CCT.
OR INTER-SWBD EXTN. ON PMBX No. 4.**

N2239
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SIGNALLING GROUP C G/AC IN; LOOP OUT

CIRCUIT OPERATION

GENERAL.

THIS SIGNALLING GROUP DOES NOT GIVE STANDARD SUPERVISORY SIGNALS AND SHOULD ONLY BE USED IN EXCEPTIONAL CIRCUMSTANCES.

OUTGOING CALL.

TO ORIGINATE A CALL A CALLING PLUG IS INSERTED INTO THE JACK AND THE EARTH FROM THE AUXILIARY JACK SPRINGS OPERATES RELAY SJ. SJ2 EXTENDS THE EARTH FROM RESISTOR R4 TO OPERATE THE CORD CIRCUIT RELAY SC. SJ6 OPERATES RELAY L0. INTERRUPTED RINGING FROM THE CORD CIRCUIT PASSES INTO THE UNIT SIGNALLING SA 7612 AS FAR AS CONTACTS B1 AND B2 BUT IS INEFFECTIVE AT THIS STAGE. L06 STEPS ON THE FLS EARTH IF FLS IS FITTED. SJ3 AND L03 APPLY RELAY LB ACROSS THE LINE A AND B AND RELAY LB OPERATES TO THE DISTANT END BATTERY AND EARTH. LB1 OPERATES RELAY B. B1 AND B2 EXTEND THE CORD CIRCUIT RINGING TO RESISTOR R1 WHICH TRIPS THE RINGING. THE CORD CIRCUIT CALLING SUPERVISORY DARKENS AS FOR A NORMAL EXTENSION AND THEREFORE NO INDICATION IS GIVEN WHEN THE DISTANT END ANSWERS THE CALL.

INCOMING CALL.

RINGING APPLIED TO THE LINE BY THE DISTANT END OPERATES RELAY RR. RR2 OPERATES RELAY EPA. EPA6 OPERATING PROVIDES A LOCKING CIRCUIT FOR RELAY EPA. EARTH FROM EPA1 VIA B5 AND SJ4 LIGHTS THE CALL LAMP. EPA4 BUSIES THE SLEEVE OF THE JACK. EPA5 STEPS ON THE FLS EARTH IF FLS IS FITTED. THE CALL IS ANSWERED BY THE INSERTION OF AN ANSWERING PLUG IN THE JACK. WHEN THE PLUG IS INSERTED THE AUXILIARY MAKE SPRINGS ARE OPERATED AND RELAY SJ OPERATES. SJ2 EXTENDS THE EARTH AT R4 TO OPERATE CORD CIRCUIT RELAY SA. SJ6 OPERATES RELAY L0. SJ5 RELEASES RELAY EPA. SJ3 AND L03 APPLY RELAY LB TO THE LINE TO GIVE AN ANSWER SIGNAL AND RELAY LB OPERATES. SJ4 DISCONNECTS THE CALL LAMP. LB1 OPERATES RELAY B. L06 MAINTAINS THE FLS EARTH TO THE NEXT CIRCUIT IF FLS IS FITTED. B1 AND B2 EXTEND RESISTOR R1 TO CORD CIRCUIT TO OPERATE RELAY LA THEREIN WHICH MAINTAINS THE ANSWER SUPERVISORY DARKENED.

CLEARING.

LOCAL END CLEARING FIRST - THE OPERATOR WITHDRAWS THE PLUG FROM THE JACK. RELAY SJ RELEASES. SJ6 RELEASES RELAY L0. SJ3 AND L03 REMOVE RELAY LB FROM THE LINE TO GIVE A CLEAR TO THE DISTANT END. RELAYS LB AND B RELEASE.

DISTANT END CLEARING FIRST - NO CLEARING SIGNAL IS RECEIVED AND THE OPERATOR ASCERTAINS THAT THE LINE HAS CLEARED BY ENTERING THE CIRCUIT WHEN THE EXTENSION, TO WHICH THE PRIVATE CIRCUIT IS CONNECTED, CLEARS. FOR EXCHANGE LINE CALLS (WHEN AUTHORISED) NO CLEAR IS GIVEN AND THE OPERATOR ASCERTAINS WHEN THE CALL IS FINISHED BY CONTINUED MONITORING OF THE CCT.

PROHIBITION.

UNDER PROHIBITION CONDITIONS RELAY EP WITH RESISTOR R3 AND RESISTOR R4 ARE CONNECTED TO SJ2 VIA B3. ON INCOMING CALLS THE CORD CIRCUIT RELAY SA OPERATES TO THE EARTH AT RELAY EP. WHEN THE CORD CIRCUIT IS CONNECTED TO AN EXCHANGE LINE AND RELAY B OPERATES ON ALL CALLS, THE CORD CIRCUIT SWITCHES TO THE THROUGH CLEARING CONDITION. THE OPERATION OF THE CORD CIRCUIT RELAY X CHANGES THE CORD CIRCUIT CLEAR CONDITION FROM A 4000Ω TO AN 800Ω BATTERY. THE 800Ω CONDITION OPERATES RELAY EP, THE 4000Ω CONDITION DOES NOT. EP1 OPERATES RELAY EPA. EPA2 MAINTAINS THE IMPEDANCE R5 AND C1 ACROSS THE LINE PAIR AND WITH EPA3 DISCONNECTS THE INTER-PBX CIRCUIT AND RELEASES RELAY LB. EPA1 HOLDS RELAYS B AND SJ. EPA7 GIVES A THROUGH CLEAR AND THE EXCHANGE LINE CIRCUIT IS RELEASED. SJ3 PREVENTS A REOPERATION OF RELAY RR SHOULD THE DISTANT END ATTEMPT TO RECALL. RELAY EP HOLDS UNTIL THE PLUG IS REMOVED.

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