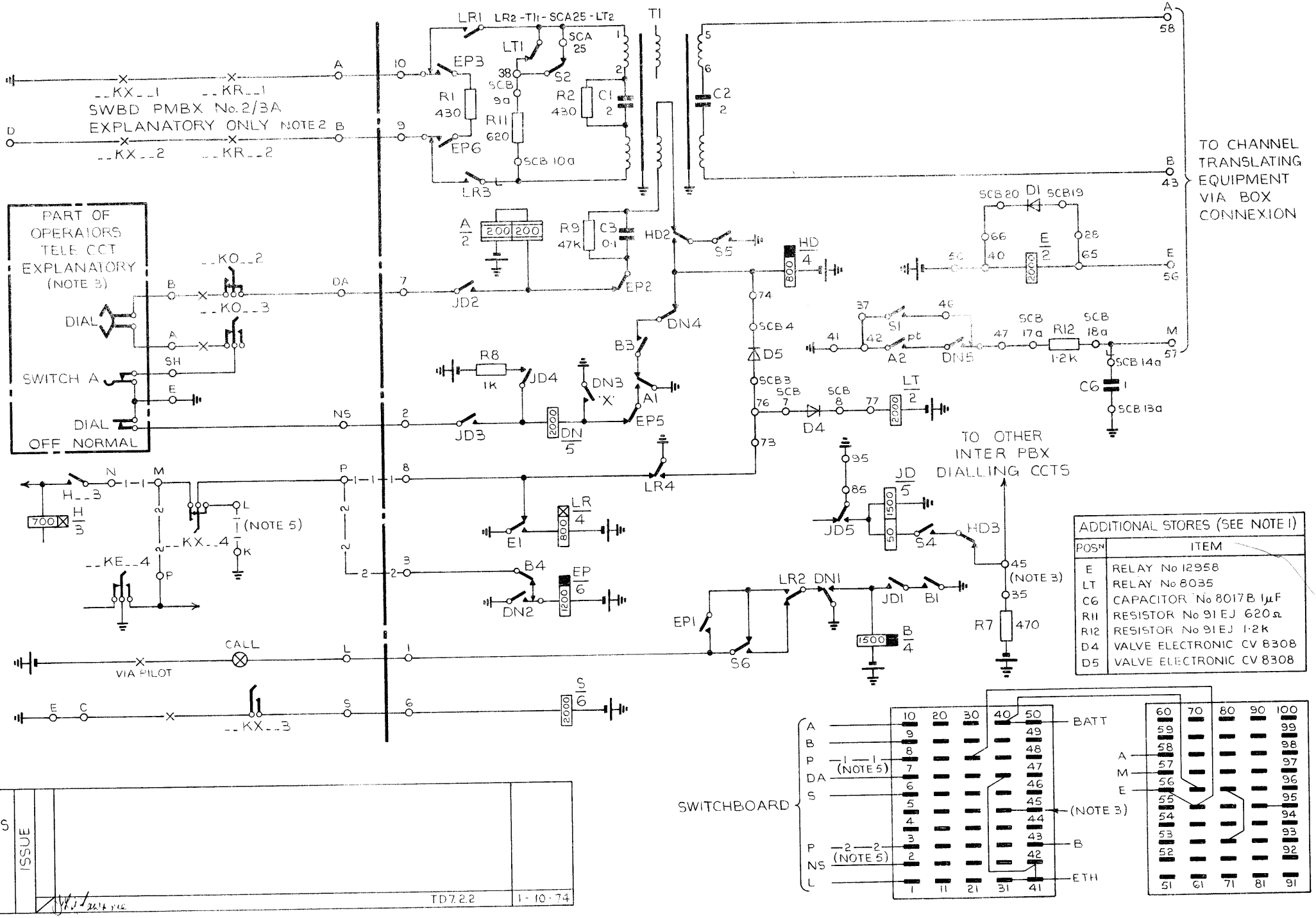
TERMINATION OF AN INTER-PBX CIRCUIT ON A PMBX 2/3A
UAA No 99A (MODIFIED) CONNECTED FOR SSDC5 (E & M)
WITH DIALLING TO A STANDARD PABX



ADDITIONAL STORES (SEE NOTE 1)	
POSN	ITEM
E	RELAY No 12958
LT	RELAY No 8035
C6	CAPACITOR No 8017B 1μF
R11	RESISTOR No 91EJ 620Ω
R12	RESISTOR No 91EJ 1·2K
D4	VALVE ELECTRONIC CV 8308
D5	VALVE ELECTRONIC CV 8308

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CONNEXIONS FOR EXTENSIONS 7-12 WITH UAA No 99A

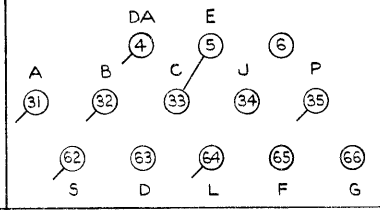
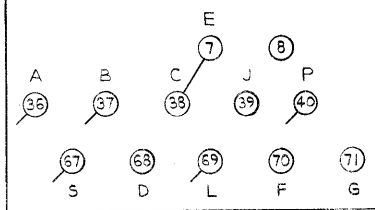
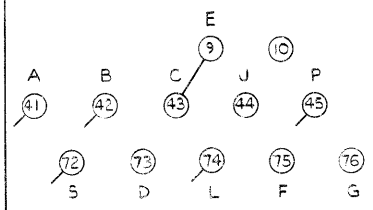
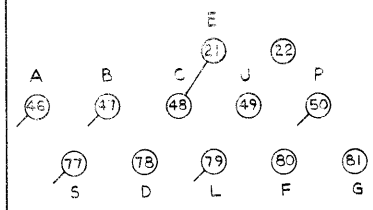
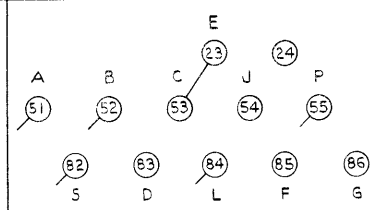
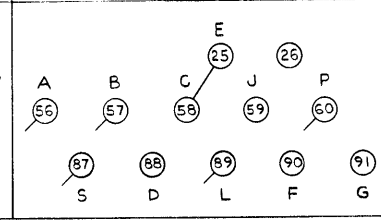
NOTES:-

A. CABLE DISTRIBUTION 3000... SERIES SHOULD BE USED FOR CABLING BETWEEN THE BOX CONN No 5B AND THE UAA.

B. ON INTER-PBX EXTNS OR PRIVATE CCTS WITHOUT EXCHANGE PROHIBITION CONNECT 'P' WIRE TO TAG 8 AND ON PRIVATE CCTS WITH PROHIBITION CONNECT 'P' WIRE TO TAG 3 OF THE STRIP CONN No 121A IN THE UAA. (SEE NOTE 5)

C. WHEN MORE THAN ONE UAA IS PROVIDED ON THE SWITCHBOARD THE NS & DA CONNEXIONS SHOULD BE MULTIPLED BETWEEN UNITS.

D. THE 'E' AND 'M' WIRES SHOULD BE TERMINATED ON SUITABLE SPARE TERMINALS ON THE BOX CONN AND SHOULD BE CLEARLY MARKED.

EXTN No.	CHANGES TO SWITCHBOARD TERMINAL BLOCK		CABLING BETWEEN BOX CONN No 5B & THE UAA. (NOTE A)		
	CORDAGE & STRAPPING ALTERATIONS	TERMINAL BLOCK CONNEXIONS AFTER CHANGES HAVE BEEN MADE	BOX CONN No. 5B		UAA TAG NUMBER
			WIRE	TERMINAL	SSDC5 (E & M)
7	DISCONNECT STRAP 33 – 35 " " 62 – 63 " " 63 – 64 MOVE CORD FROM 33 – 64 " " " 5 – 62 " " " 6 – 35 PROVIDE STRAP 5 – 33		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B1 B2 B3 B4 B5 D29 A12 D1 D2 E M (NOTE D) D8 DE1	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41
8	DISCONNECT STRAP 38 – 40 " " 67 – 68 " " 68 – 69 MOVE CORD FROM 38 – 69 " " " 7 – 67 " " " 8 – 40 PROVIDE STRAP 7 – 38		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B6 B7 B8 B9 B10 D29 A12 D3 D4 E M (NOTE D) D9 DE2	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41
9	DISCONNECT STRAP 43 – 45 " " 72 – 73 " " 73 – 74 MOVE CORD FROM 43 – 74 " " " 9 – 72 " " " 10 – 45 PROVIDE STRAP 9 – 43		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B11 B12 B13 B14 B15 D29 A12 D5 D6 E M (NOTE D) D10 DE3	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41
10	DISCONNECT STRAP 48 – 50 " " 77 – 78 " " 78 – 79 MOVE CORD FROM 48 – 79 " " " 21 – 77 " " " 22 – 50 PROVIDE STRAP 21 – 48		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B16 B17 B18 B19 B20 D29 A12 D16 D17 E M (NOTE D) D11 DE4	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41
11	DISCONNECT STRAP 53 – 55 " " 82 – 83 " " 83 – 84 MOVE CORD FROM 53 – 84 " " " 23 – 82 " " " 24 – 55 PROVIDE STRAP 23 – 53		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B21 B22 B23 B24 B25 D29 A12 D18 D19 E M (NOTE D) D12 DE5	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41
12	DISCONNECT STRAP 58 – 60 " " 87 – 88 " " 88 – 89 MOVE CORD FROM 58 – 89 " " " 25 – 87 " " " 26 – 60 PROVIDE STRAP 25 – 58		A B L S P NS DA A B E M BATT EARTH SWBD CTE	B26 B27 B28 B29 B30 D29 A12 D20 D21 E M (NOTE D) D13 DE6	10 9 1 6 3 OR 8 (NOTE B) 2 7 (NOTE C) 58 43 56 57 50 41

NOTES:-

1. The UAA 99A should be modified in accordance with the circuit diagram on page 1. The relay should be recovered and replaced by E relay. LT relay should be mounted in the spare relay position. Other additional stores items should be located and wired as shown. The unit should be labelled UAA 99A(N1120) modified to diagram N766.

2. See Dgm. SAW71640 for circuit and terminal block of Switchboard. For connexion of UAA to Switchboard, see page 2.

3. When more than one Inter-PBX circuit with dialling facilities is fitted, provide Strap 35-45 on the first unit only and multiple Tag 45 to the corresponding tags on the other Inter-PBX dialling circuits.

4. Connexions to the operator's telephone circuit are typical only. See Dgm. N1103 for the required arrangement.

5. On circuits without exchange prohibition, provide wiring thus -1-1- and strap the Switchboard connexion strip in accordance with Fig. 3C of Dgm. SAW71640 Sheet 2. On circuits with exchange prohibition, provide wiring thus -2-2- and strap the Switchboard in accordance with Fig. 3D of Dgm. SAW71640 Sheet 2.

CIRCUIT OPERATION

OUTGOING CALL SSDC5 (E&M)

To originate a call from the Switchboard, ..KX.. is operated. Eth via ..KX..3 operates Relay S in the UAA. S6 lights the call lamp via LR2 and SM1. S4 operates Relay JC. KC.. (if operated) is restored. JD2 operates Relay A via KC..2, Dial, Springs, KO..3 to Eth. JD5 short circuits 1500Ω coil of Relay JD to reduce the potential at UAA Tag 45 to prevent operation of other UAA. JD Relays, if provided, are to prevent operator dialling on more than one PABX circuit simultaneously, if the KX key of another circuit is operated. S1 applies Eth to the M wire to seize the distant end. If dial tone is returned it is induced into the tone winding circuit of the transformer. The circuit is Eth at S5, HD2, tone winding, C3, EP2, JD2, KC..2 normal, operator's telephone, KC..3 normal to Eth, at E. A1 short-circuits Relay DN. When operator moves dial off-normal, the short-circuit is removed by the off-normal springs allowing Relay DN to operate via Batt, R6, JD4, Relay DN, EP5 to A1 Eth. DN5 applies A2 Eth to the M 'wire' to complete dialling circuit. DN1 disconnects call lamp. Dial operates. Relay A pulses. A2 applies Eth pulses to the M wire. Extn lamp is darkened during dialling to give indication of circuit in use. Dialling completed-Extn lamp maintained. Answer condition from distant end is Eth on the E wire. This operates Relay E. E1 operates Relay LR. LR1 and LR3 connect UAA to connecting circuit. LR2 disconnects calling lamp. LR4 operates relays LT and HD. HD3 releases Relay JD and LT1 disconnects the line terminating resistance. Dialling on other PABX circuits may now take place.

INCOMING CALL SSDC5 (E&M)

Calling signal from distant end to Eth on the E wire. This operates Relay E. E1 operates Relay LR. LR2 lights calling lamp. LR1 and LR3 connect PABX circuit to connecting circuit. LR4 operates Relays HD and LT. HD3 prevents operation of Relay JD when Relay S operates. This allows other JD Relays (if fitted) to be operated on O/G calls. When operator answers, Extn key is operated. ..KX..3 operates Relay S. S6 disconnects call lamp. S1 connects Extn line circuit to UAA. S2 disconnects the line terminating resistance.

CLEARING SSDC5 (E&M)

If distant PABX clears first-Eth removed from the E wire - Relay E releases. E1 releases Relay LR. LR2 released lights extension lamp to give clear on PMBX. LR4 releases Relay S2. Operator restores Extn key. ..KX..3 releases Relay S. S1 disconnects A line to PABX. S5 releases Relay HD. S6 disconnects Extn lamp. S2 reconnects the line terminating resistance. Circuit normal.

If PMBX clears first, operator restores Extn key. ..KA..3 releases relay S. S1 disconnects Eth from the M wire. S2 reconnects the line terminating resistance. S5 releases Relay HD. S6 lights Extn lamp. Disconnection of the Eth from the M wire releases the distant equipment. Eth removed from the E wire releases Relay E. E1 released releases Relay LR. LR2 disconnects Extn lamp. LR3 releases Relay LT. Circuit normal.

AUTOMATIC HOLD AND RECALL [illegible]

By altering straps in the Switchboard and connecting the wire from Terml P to Terml S or Terml T in the UAA (See note 5) it can be arranged to either:-

(a) Disconnect the Eth used for the automatic hold facility on long extensions where removal of exchange prohibition has been authorised.

or

(b) Give an exchange prohibition on private circuits.

(a) Automatic hold (See connexions shown -1-1-). When the automatic hold condition is applied to the connexion circuit of the Switchboard, Relay H.. operates and holds to Eth at E1. normal via Terml 8, Terml P, ..KX..4, Terml M, Terml N, H3. The slow to operate feature of Relay LR maintains the Eth at Terml 3 in the event of a flick operation of Relay E. When LR operates, LR1 completes a loop circuit back to the Switchboard for through clearing purposes. LR2 extinguishes the call lamp. LR4 disconnects the Eth holding Relay H.. in the Switchboard to remove the holding loop from the exchange line.

(b) Prohibition (see connexions shown -2-2-). Operation of an exchange line Key KE in addition to an Extn connecting Key KX applies an Eth to Terml 3 of the UAA via ..KE..4, Terml P, Terml M, ..KX..4, Terml P, which operates Relay EP. EP1 lights the call lamp to indicate to the Switchboard operator that the distant end is not connected. EP2 operated prevents transmission via the tone winding and the operator's telephone circuit to the exchange line circuit. EP3 and EP6 disconnect PABX circuit from Switchboard and apply hold loop. If KE is operated after dialling, the line is disconnected at EP3 and EP6 and, if KE is operated before dialling, no pulsing takes place as EP5 has disconnected the operate path of relay DN.