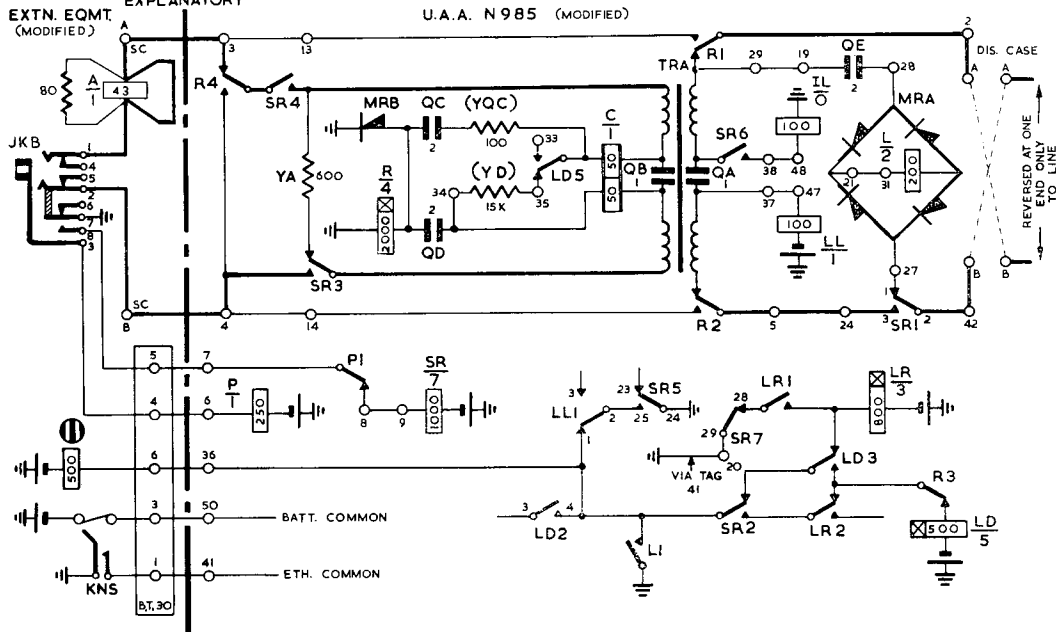


N713
4 PANELS-1
18-9-62

4 PANELS-1
18-9-62

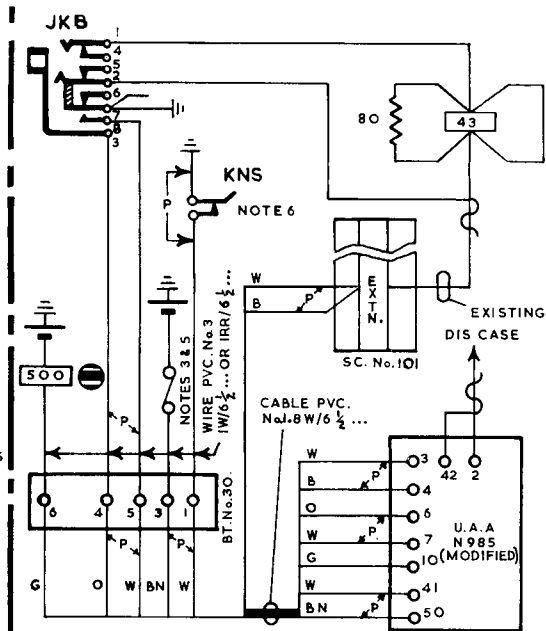
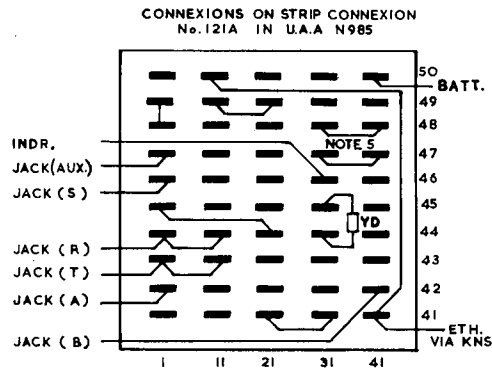
U.A.A. N 985 (MODIFIED)

EXTN. EQMT.
(MODIFIED)

REVERSED AT
END ONLY
TO LINE

[illegible]

WIRING DETAILS



TERMINATION OF INTER-SWITCHBOARD PRIVATE CCT. N 713

SWITCHBOARD CB 873

SIGNALLING GROUP A(ii) G/AC IN; A / WE OR G/AC OUT

4 PANELS-3
18-9-62

INSTALLATION NOTES .

CIRCULATION	GENERAL
Suffix	
Amend	
PAPER	W

1. "RECOVERED" WIRES TO BE INSULATED AND TIED BACK.
2. THE EARTHED LEAD FROM THE RINGING SOURCE MUST BE CONNECTED TO THE 'TIP' SIDE OF KR & KDR (N930 FIG.8). THE HAND GENERATOR SHOULD BE EARTHED ACCORDINGLY.
3. BATTERY SUPPLY TO U.A.A. TO BE MADE VIA A FUSE No.36/1 FITTED ON A FUSE MTG. No.136A, SCREWED TO THE WOODWORK ABOVE EXISTING FUSE MTG., FUSE TO SUPPLY 1 TO 4 UNITS.
4. SEE N705 TABLE 1 FOR SIGNALLING RESISTANCE LIMITS AT VARIOUS VOLTAGES.
5. WHERE NECESSARY FOR SIGNALLING ADDITIONAL CELLS MAY BE INSERTED BETWEEN U.A.A. TERMLS, 37 & 47 (SEE NOTE II).
6. KNS CONTACT UNIT No. HAS SAME No. AS SELECTED EXTENSION.
7. WHERE OMISSION OF EXCHANGE PROHIBITION HAS BEEN AUTHORISED, TERMINATE CIRCUIT TO DIAGRAM N773.
8. REQUISITION SEPARATELY:-QE CAPACITOR M.C No.102 WITH CLIP No.42; IL COIL, RETARD No.3419; LL RELAY No.5875; YD RESISTOR No.15GD-15K Ω ; FUSE No.36/1 AND FUSE MTG. No.136A IF NOT ALREADY PROVIDED (NOTE 3) BT. No.30.
9. WIRE IL, LL & QE AS SHOWN IN DGM. N985 PANEL 7 BUT OMIT CONNEXIONS SHOWN TO LL 2 & 3.
10. A LABEL WHITE No.398A MARKED *U.A.A. MODIFIED TO DGM. N713 ' TO BE FIRMLY AFFIXED TO U.A.A..
11. WHERE ADDITIONAL CELLS FOR SIGNALLING MAY BE SHARED BY U.A.A.'s, MODIFY LL RELAY WIRING BY DIS-CONNECTING LL e FROM BATTERY COMMON AND BY CONNECTING LL e TO SPARE TERML. 44 OF SC No.121A. CONNECT SIGNALLING BATTERY TO THIS TAG (AND NOT AS IN NOTE 5).

RECOVER	SHIFT	PROVIDE
SEE NOTE 1. WIRES FROM DIS CASE TO SELECTED EXTN. AT BOTH ENDS. WIRES FROM JKB(7) & (8) STRAP BETWEEN JKB(2) & (6) WIRES FROM KNS. SPRINGS WIRES FROM INDICATOR WIRE TO SR2 WIRE TO SR1 WIRE TO LRI	WIRES FROM JKB (4) TO (7)	BT. No.30 ADJACENT TO SC No.101 IN SWBD. FUSE MTG. No.136A (NOTE 3) WIRE FROM MAIN POWER CONNEXION ON SWBD FUSE TO FUSE MTG. No.136A (NOTE 3) WIRE SHORT CIRCUIT ACROSS 'A' RELAY OF EXTN. WIRES FROM BT. No.30 TERMINALS AS FOLLOWS:- (1) TO KNS BREAK SPRG. (3) TO FUSE MTG. No.136A. (4) TO JKB (3) (5) TO JKB (8) (6) TO INDICATOR. WIRE KNS TRAVELLER SPRG. TO ETH. BUS BAR SPARE TERML. CABLE FROM SC & BT. TO U.A.A. AS SHOWN. CABLE FROM U.A.A. TO DIS CASE EXTN. TERMLS RESISTOR YD ACROSS SC121 TAGS 34 & 35. RETARD IL, RELAY LL & CAPACITOR QE AND CONNECT TO EXISTING WIRING (NOTE 9) WIRE LRI TO SR2B WIRE SR1 TO TAG 27 WIRE SR2 TO TAG 42 WIRE LL2 TO SR25 WIRE LL1 TO LD 4 STRAPS ON SC No.121 AS SHOWN ON PANEL 2

CIRCUIT OPERATION NOTES

FOR A DESCRIPTION OF SIGNALLING GROUP A (ii), SEE E.I. TELE'S
PBX'S B 3101 & B 3102.

INCOMING CALL.

L OPS. TO RINGING CURRENT FROM DISTANT PBX. LI OPS. INDICATOR
AND LR, WHICH HOLD TO LRI. SR OPS. WHEN LOCAL OPERATOR
INSERTS PLUG. SR 6 RETURNS ANSWER SIGNAL ON A WIRE OF LINE.
SR 5 PROVIDES ALTERNATIVE HOLD PATH FOR INDICATOR. SRI
DISCONNECTS L AND APPLIES LL TO B WIRE OF LINE. SR 2 & 7
RELEASE LR. INDICATOR RESTORES WHEN LL OPS. TO EARTH ON B
WIRE. SR 3 & 4 COMPLETE SPEECH PATH TO CORD CIRCUIT.

OUTGOING CALL.

SIGNAL USED DEPENDS UPON DISTANT TERMINATION.

A/WE SIGNALLING:-

SR OPS. WHEN LOCAL OPERATOR INSERTS PLUG. SR 6 APPLIES
CALLING EARTH TO A WIRE. SR 5 OPS. INDICATOR (AND LD, WHICH IS
INEFFECTIVE). SR 3 & 4 EXTEND CORD CIRCUIT SPEECH PATH TO LINE.
LL OPS. WHEN DISTANT OPTR. ANSWERS. LLI RESTORES INDICATOR
AND RELEASES LD.

G/AC SIGNALLING :-

SR OPS. WHEN LOCAL OPERATOR INSERTS PLUG. SRI DISCONNECTS
L RELAY CIRCUIT AND CONNECTS TRANSFORMER ACROSS LINE.
SR 5 OPS. INDICATOR (AND LD-INEFFECTIVE). SR 6 EXTENDS EARTH
ON A WIRE (INEFFECTIVE AT THIS STAGE). SR 3 & 4 CONNECT R
RELAY TO CORD CIRCUIT. LOCAL OPERATOR RINGS AND RINGING
CURRENT FLOWS FROM EARTHED GENERATOR OVER RING WIRE
OF CORD CIRCUIT AND JACK TO OPERATE R RELAY VIA SR 3.
(AT THIS STAGE A SHUNT PATH TO EARTH VIA SR 4, R 4 AND
THE CORD CIRCUIT RINGING RETURN REDUCES GENERATOR
OUTPUT AVAILABLE FOR OPERATION OF RELAY R). WHEN R OPS.,
THE SHUNT PATH IS DISCONNECTED AND AN ADDITIONAL HOLD PATH
FOR R IS ESTABLISHED BY R 4. EARTHED RINGING IS SENT TO LINE
VIA R 2. RI APPLIES RINGING RETURN EARTH FROM CORD CIRCUIT.
WHEN DISTANT OPERATOR HAS ANSWERED AND RINGING HAS CEASED,
LL OPS. VIA R 2 TO ANSWERING EARTH ON B WIRE. LLI
RESTORES INDICATOR (AND RELEASES LD).

CLEARDOWN FROM ESTABLISHED CONNEXION.

(RELAYS OPERATED DURING AN ESTABLISHED CONNEXION-LL, SR).

LOCAL PBX CLEARS FIRST:-

LOCAL OPERATOR REMOVES PLUG AFTER RECEIVING A CLEAR
FROM LOCAL EXTENSION AND HAVING CHALLENGED THE CIRCUIT.
SR RELEASES. SR 6 REMOVES EARTH FROM A WIRE TO GIVE A
CLEAR TO DISTANT PBX. SRI RELEASES LL. (INDICATOR DOES
NOT OPERATE DURING THIS CLEARDOWN).

DISTANT P.B.X. CLEARS FIRST

LL RELEASES WHEN DISTANT PBX. GIVES A CLEAR. LLI
OPERATES INDICATOR (AND LD). SR RELEASES WHEN LOCAL
OPTR. REMOVES PLUG. SR 6 GIVES A CLEAR TO DISTANT PBX.
SR 5 RESTORES INDICATOR (AND LD).

CALLING-IN.

DURING AN ESTABLISHED CONNEXION LOCAL OPERATOR MAY
CALL-IN DISTANT OPERATOR BY SLOWLY REMOVING AND
RE-INSERTING THE PLUG. SR RELEASES AND REOPERATES
AND SR 6 CAUSES A FLASHING SUPERVISORY SIGNAL AT
DISTANT PBX.
SIMILARLY, LL RELAY WILL RESPOND IF DISTANT OPERATOR
FLASHES. LLI WILL CAUSE THE INDICATOR TO FLASH IN THIS
CASE.

PROHIBITION.

IF AN EXCHANGE LINE IS CONNECTED TO THE
INTERSWITCHBOARD PRIVATE CIRCUIT JACK, P RELAY OPS. TO
EARTH ON EXCH. LINE JACK. PI RELEASES SR. SR 3 & 4
DISCONNECT SPEECH PATH. SR 6 GIVES A CLEAR TO DISTANT
PBX..

CONTACT-WETTING.

RESISTOR YD IS PROVIDED SO THAT A CURRENT OF
APPROXIMATELY 1 mA FLOWS FROM THE CORD CIRCUIT DURING
A CALL THROUGH CONTACTS R 4, SR 4, LD 5 AND SR 3 TO
PREVENT TRANSMISSION LOSSES WHICH WOULD OTHERWISE OCCUR
IF NO DC. WERE FLOWING.