TERMINATION OF PRIVATE CIRCUIT OR LONG EXTENSION (NOTE 1)

SWITCHBOARD CB873 SIGNALLING GROUP G. A/BB IN; G/BB OUT.

N718

6 PANELS-1

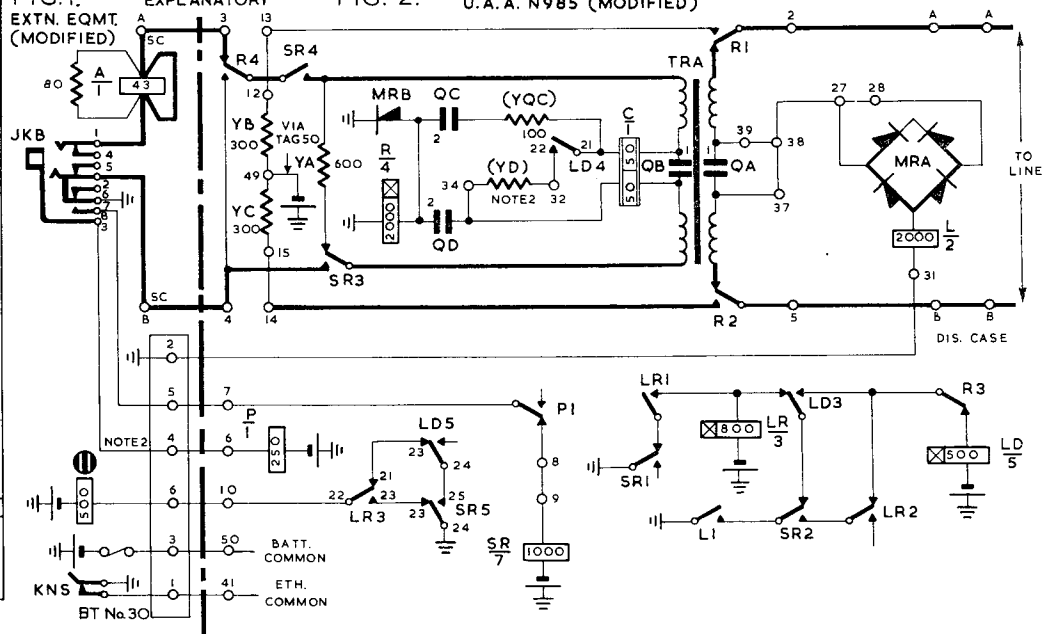
5-4-57

CIRCULATION | GENERAL | SUFFIX | A | 6.9.62 | REDRAWN, WAS 3 PANELS. | AMENDT. | PAPER | W

FIG. 1. EXTN. EQMT. (MODIFIED)

EXPLANATORY

FIG. 2. U.A.A. N985 (MODIFIED)



N718

6 PANELS – 2

FIG. 3. CONNEXIONS ON STRIP CONNEXION No. 121A IN UAA N985 WHEN WIRED TO PANEL 1.

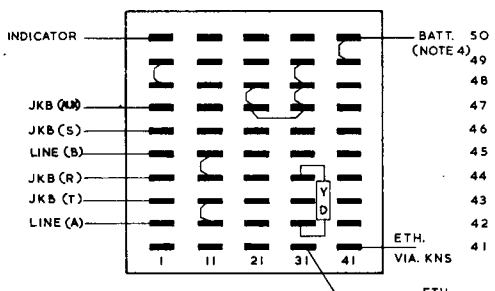
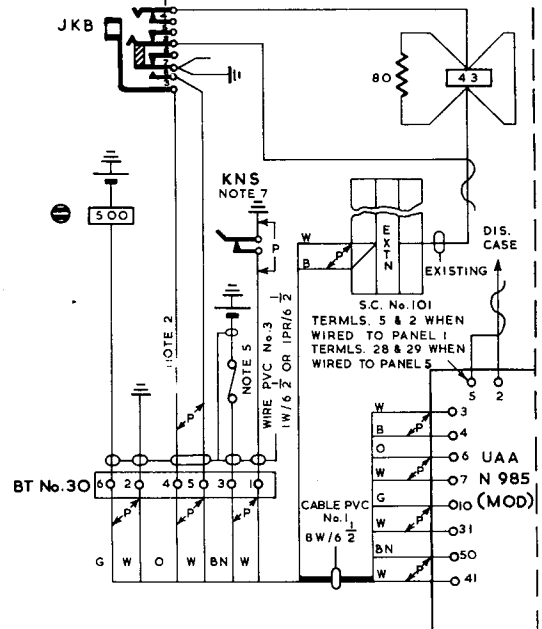


FIG. 4. WIRING DETAILS



CIRCULATION	SUFFIX	AMENDT.	PAPER
GENERAL	A	REDRAWN, WAS 3 PANELS 6.9.62.	W

TERMINATION OF PRIVATE CIRCUIT OR LONG EXTENSION (NOTE 1) N718

SWITCHBOARD CB873 SIGNALLING GROUP G.
SCHEDULES

6 PANELS -3
5·4·57

WIRING

FOR PANELS 1 AND 5		
RECOVER (NOTE 8)	SHIFT	PROVIDE
STRAP JKB (2) & (6) WIRE JKB (7) – KNS (NOTE 7) WIRE XA – KNS. WIRE FROM JKB (8) WIRES (IN UAA) :– LD 24 – Cb. SR 2 – LD 21 – Ro.	WIRES FROM JKB (4) TO JKB (7). REVERSE WIRES ON LR22 & LR23.	BT No. 30 ADJACENT TO S.C. No. 101 IN SWBD. FUSE MTG. No. 136A (NOTE 5). WIRE FROM MAIN BATTERY CONNEXION ON EXISTING FUSE MTG. IN SWBD. TO FUSE MTG. No. 136A. WIRE SHORT CIRCUIT ACROSS A RELAY. WIRES FROM BT No. 30 TERMINALS AS FOLLOWS :– (1) TO KNS BREAK SPRING. (2) TO EARTH BUS BAR SPARE TERML. (3) TO FUSE MTG. No. 136A. (4) TO JKB (3). (5) TO JKB (8). (6) TO INDICATOR. WIRE KNS SPRING TO EARTH BUS BAR SPARE TERML. CABLE FROM S.C. & B.T. TO UAA. AS SHOWN IN FIG. 4. WIRES IN UAA :– LR 21 – LD 23. LD 21 – Cb. LD 24 – SR 25. SR 2 – Ro. RESISTOR YD (NOTE 2) ACROSS S.C. TAGS 32 – 34. STRAPS ON S.C. AS SHOWN IN FIG. 3 OR FIG. 5.
ADDITIONAL FOR PANEL 5		
WIRE R1-TRA (4). WIRE R4-TRA (7).	—	RELAY LG IN SPACE FOR LL RELAY (CENTRE RELAY POSITION AT LEFT END), AND CONNECT BY EXISTING WIRING TO TAGS 46, 47 AND TO BATTERY COMMON AS SHOWN IN FIG. 6. WIRE FROM R1 TO LG 2. WIRE FROM LG1 TO TAG 27 OF S.C. RESISTOR YE BETWEEN TAGS 41 & 46 OF S.C.

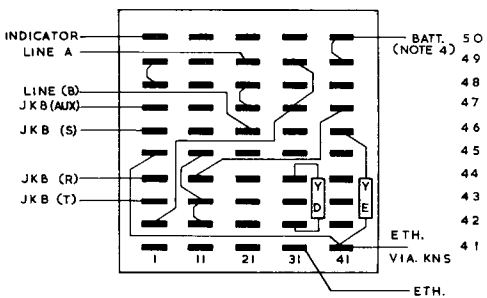
APPARATUS

FOR FIGS 2 & 6
UAA. N985. FUSE MTG. No. 136A. } (SEE NOTE 5) FUSE No. 36/1 } B.T. No. 30.... RESISTOR CARBON No. 15 GD – 15k Ω (SEE NOTE 2)
ADDITIONAL ITEMS FOR FIG. 6
RELAY No. 4460. RESISTOR CARBON No. 15 GD – 1k Ω.

N 718

6 PANELS - 4

FIG. 5. CONNEXIONS ON STRIP CONNEXION No. 121A IN UAA. N985 WHEN WIRED TO PANEL 5.



INSTALLATION NOTES

1. EXTENSION CIRCUITS WHICH EXCEED THE LOOP - SIGNALLING LIMIT MAY BE TERMINATED TO N 718 WITH SUITABLE EQUIPMENT AT DISTANT END, BUT WITH LOSS OF DIALLING AND EXCHANGE NIGHT SERVICE FACILITIES, PROVIDING TRANSMISSION REQUIRMENTS ARE SATISFIED. E.I. TRANSM. TELE. B 3534 GIVES TRANSMISSION AND LOOP - SIGNALLING LIMITS OF SWITCHBOARD. (SEE NOTE 10).

2. WHEN N718 IS USED AS A PRIVATE CIRCUIT TERMINATION RESISTOR YD SHOULD BE PROVIDED. WHEN USED AS A PRIVATE CIRCUIT TERMINATION WITH OMISSION OF PROHIBITION, OR AS AN EXTENSION TERMINATION (SEE NOTE 1) RESISTOR YD SHOULD BE OMITTED, TAGS 32 & 34 STRAPPED AND CONNEXION JKB (3) TO BT No. 30 (4) OMITTED.

3. SEE N705 TABLE 3 FOR SIGNALLING RESISTANCE LIMITS WITH VARIOUS VOLTAGES.

4. WHERE NECESSARY, ADDITIONAL CELLS (SERVING 1 TO 4 UNITS WITH COMMON FUSE, NOTE 5) MAY BE CONNECTED IN PLACE OF STRAP BETWEEN UAA TAGS 49 & 50.

5. BATTERY SUPPLY TO UAA TO BE MADE VIA A FUSE No. 36/1 FITTED ON A FUSE MTG. No. 136A, SCREWED TO THE WOODWORK IN SWITCHBOARD, ABOVE EXISTING FUSE MTG.. THE FUSE TO SUPPLY 1 TO 4 UNITS.

6. THE EARTHED LEAD FROM THE RINGING SOURCE MUST BE CONNECTED TO THE "P" SIDE OF KR & KDR (N930 FIG.8) THE HAND GENERATOR MUST BE EARTHED ACCORDINGLY.

7. KNS CONTACT UNIT No. HAS THE SAME No. AS SELECTED EXTN..

8. RECOVERED WIRES TO BE INSULATED AND TIED BACK.

9. A LABEL, WHITE No. 398A MARKED "MOD. TO DGM. N718, FIG.... (INSERT "2" OR "8" AS APROPRIATE), TO BE FIRMLY AFFIXED TO UAA..

10. FOR LINES UNDER 100 MILES, USE FIG. 2, AND FOR LINES OF 100 MILES OR MORE, USE FIG. 6.

TERMINATION OF PRIVATE CIRCUIT OR LONG EXTENSION (NOTE 1)

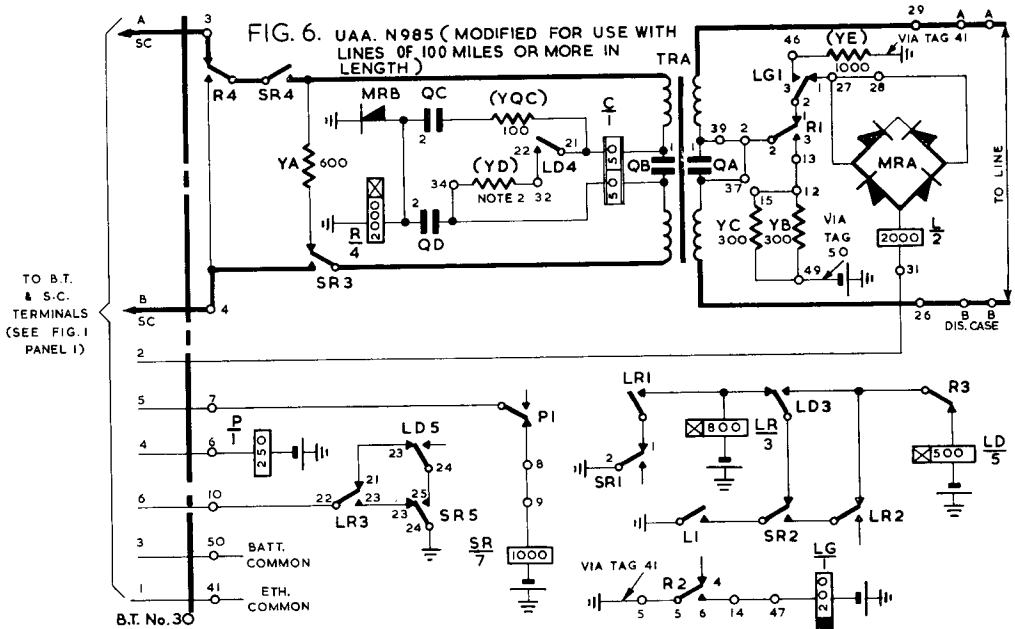
N718

6 PANELS-5
5·4·57

SWITCHBOARD CB 873 SIGNALLING GROUP G.

EXPLANATORY

FIG. 6. UAA. N985 (MODIFIED FOR USE WITH LINES OF 100 MILES OR MORE IN LENGTH)



CIRCULATION: GENERAL
SUFFIX: A — 6.9.62 — REDRAWN, WAS 3 PANELS
AMENDT.
PAPER: W

N 718

6 PANELS - 6

CIRCUIT OPERATION NOTES

THESE NOTES REFER TO PANEL 1, FIGS. 1 & 2, EXCEPT WHERE STATED.
FOR A DESCRIPTION OF SIGNALLING GROUP G, SEE E.I. TELE'S. P.B.X'S. B 3101 & 3102.

INCOMING CALL L OPERATES AND HOLDS TO BALANCED BATTERY ON THE LINE. LI OPS. LR WHICH HOLDS TO LR1. LR3 OPS. INDICATOR. SR OPS. WHEN OPERATOR INSERTS PLUG. SR3 & 4 COMPLETE SPEAKING CIRCUIT. SR2 RELEASES LR AND OPERATES LD. INDICATOR RESTORES.

OUTGOING CALL SR OPS WHEN OPERATOR INSERTS PLUG. INDICATOR OPS. TO SR5 OPTD, LD5 & LR3 NORMAL. SR3 & 4 CONNECT R RELAY TO CORD CIRCUIT. WHEN OPERATOR RINGS, RINGING CURRENT FLOWS FROM EARTHED GENERATOR OVER RING WIRE OF CORD CIRCUIT AND JACK TO OPERATE R RELAY VIA SR3. (AT THIS STAGE, A SHUNT PATH TO EARTH VIA SR4, R4 AND CORD CIRCUIT RINGING RETURN, REDUCES GENERATOR OUTPUT AVAILABLE FOR OPERATION OF R RELAY). WHEN R OPS, THE SHUNT PATH IS DISCONNECTED AND AN ADDITIONAL HOLD PATH FOR R IS ESTABLISHED BY R4. BALANCED BATTERY IS APPLIED TO LINE BY R1 & 2. RELEASE OF R RELAY UPON CESSATION OF RINGING SIGNAL PREPARES PATH FOR L RELAY TO OPERATE WHEN EXTENSION ANSWERS. LI OPS. LD. LD5 RESTORES INDICATOR.

CLEARDOWN FROM ESTABLISHED CONNEXION (RELAYS OPERATED, SR, LD).

(a) OPERATOR CLEARS FIRST UPON RECEIVING A CLEAR FROM LOCAL EXTN. AND HAVING CHALLENGED ON THE CIRCUIT, OPERATOR REMOVES CORD CIRCUIT PLUG. SR RELEASES. LD HOLDS TO EARTH ON LI, SR2, LD3 OPERATED. (LD HAS SUFFICIENT RELEASE LAG TO COVER THE TRANSITION PERIOD OF SR2). L RELEASES WHEN DISTANT EXTN. CLEARS. LI RELEASES LD.

(b) DISTANT EXTN. CLEARS FIRST L RELEASES TO REMOVAL OF BALANCED BATTERY. LI RELEASES LD. INDICATOR OPS. TO EARTH VIA SR5 OPTD, LD5 AND LR3 NORMAL. OPERATOR CHALLENGES ON CIRCUIT THEN REMOVES PLUG. SR RELEASES. INDICATOR RESTORES.

PROHIBITION WITH CIRCUITS WHERE PROHIBITION OF EXCHANGE CONNEXION HAS BEEN PROVIDED, P RELAY WILL OPERATE IF SUCH A CONNEXION IS ATTEMPTED. P1 RELEASES SR. SR3 & 4 DISCONNECT SPEAKING CIRCUIT.

GUARD CIRCUIT WHERE LINES OF 100 MILES OR MORE ARE USED, THERE IS A POSSIBILITY THAT L RELAY WILL OPERATE TO DISCHARGE OF THE LINE CAPACITANCE AFTER A SIGNAL HAS BEEN SENT, i.e. UPON RELEASE OF R RELAY. LG RELAY IS USED IN FIGURE 6 TO PREVENT THIS, BY DISCHARGING THE LINE CAPACITANCE THROUGH RESISTOR YE, DURING THE SLOW RELEASE OF LG. R1 & 2 CONTACTS HAVE BEEN REARRANGED IN CIRCUIT TO MAKE PROVISION FOR LG RELAY.

CONTACT WETTING RESISTOR YD IS PROVIDED SO THAT A CURRENT OF 1mA. APPROXIMATELY, FLOWS FROM CORD CIRCUIT DURING A CALL, THROUGH CONTACTS R4, SR4, LD5 & SR3, TO PREVENT TRANSMISSION LOSSES WHICH COULD OTHERWISE OCCUR IF NO d.c. WERE FLOWING. WHERE PROHIBITION IS OMITTED THIS RESISTOR IS REPLACED BY A STRAP, IN ORDER TO PROVIDE A HOLDING LOOP TO EXCHANGE.