

# H.E.S. No. 3 (KEYMASTER)

PROVISION OF RELAY UNIT Q415 FOR TERMINATING PRIVATE AND SWITCHBOARD CIRCUITS ON H.E.S.No.3

Q(L)441

5 PANELS-1  
12-9-63

CIRCULATION	GENERAL
PAPER	W
Amend	
Suffix	

## NOTES:-

- RELAY UNIT Q415 REPLACES THE LAST MULTIPLE STATION BUT MUST BE CONNECTED BEFORE THE NON-MULTIPLE EXTENSION IF ANY. MORE THAN ONE RELAY UNIT Q415 MAY BE FITTED. ALL RELAY UNITS AND POWER UNIT MUST BE MOUNTED TOGETHER.
- FOR MULTIPLE CABLE CONNECTIONS SEE Q(L)404. RELAY UNIT IS CABLED TO TERMINALS ON THE UPPER SIDE OF B.T.37A AND TERMINALS 17 AND 18 ARE STRAPPED TOGETHER.
- COLOUR OF WIRE TO BE USED FOR CONNECTING TERMINAL 11 IN B.T. 37A TO BLOCK A TAG 48 DEPENDS ON THE NUMBER OF THE STATION WHICH THE UNIT IS REPLACING, SEE TABLE I.
- CONNECT ONE OF THE TAGS A45, A46, OR A47 (SEE TABLE II) TO THAT TERMINAL IN B.T. 37A WHICH IS MULTIPLIED TO TERMINAL 11 AT MAIN STATION B.T. USING WIRE IN SAME COLOUR AS MULTIPLE. SEE Q(L) 404.
- ONLY IF THE EXTENSION OF EXCHANGE CALLS VIA THE RELAY UNIT IS AUTHORISED CONNECT THE BLU-BRN WIRE BETWEEN B.T.37A TERMINAL 19 AND BLOCK A TAG 43. ALSO IN TELEINTERCOM No. 3/11 CONNECT KB2 TO TERMINAL 25 AT MAIN STATION ONLY. (SEE Q(L)422) AND CHANGE "BELL OFF" BUTTON FOR PART 3/DBU/341 (COLOUR) (SEE Q(L)430).
- A.C. RINGING, WHEN REQUIRED FOR SIGNALLING GROUPS A(i)b, A(ii)b AND B, IS OBTAINED FROM A CONVERTER RINGING No.7 MOUNTED IN POWER UNIT No.51A (SEE Q(L)435). CONNECTION IS MADE DIRECT FROM POWER UNIT OR RELAY UNIT Q410, USING CABLE P.V.C. No.1 2W.
- FOR DESCRIPTION OF SIGNALLING GROUPS AND PB X TERMINATIONS SEE E.L TELEs, PB X 83102.

Q 415 AS STATION	CONNECT TOGETHER		USE WIRE
	IN Q 415	IN BT 37A	IN COLOUR
2	A 48	TERM'L 11	W/SL
3	" "	" "	BLU-WH
4	" "	" "	W/BLU OR
5	" "	" "	W/BLU-WH

TABLE I

SIGNALLING GROUP		Q415 TERM'L No.	CCT. DIAGRAM
A(i) a	A/WE BOTHWAYS	A 46	Q(L)442
A(ii) a	G/AC IN A/WE OUT	A 45	Q(L)443
A(i) b	A/WE IN G/AC OUT	A 46	Q(L)444
B	LOOP IN G/AC OUT		
A(ii) b	G/AC BOTHWAYS	A 45	Q(L)445
C	G/AC IN LOOP OUT	A 45	Q(L)446
H	AUTO, BAL BATT. BOTHWAYS	A 47	Q(L)447

TABLE II

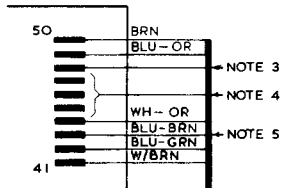
# Q(L)441

5 PANEL-2

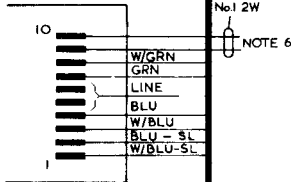
## CABLING BETWEEN MULTIPLE AND RELAY UNIT Q415

RELAY UNIT Q415

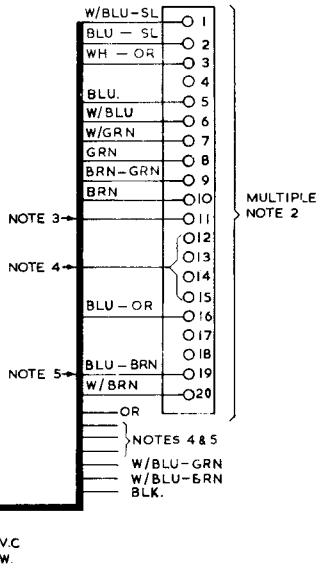
A BLOCK



B BLOCK



MULTIPLE STATION BT37A NOTES.1&2



CIRCULATION

GENERAL

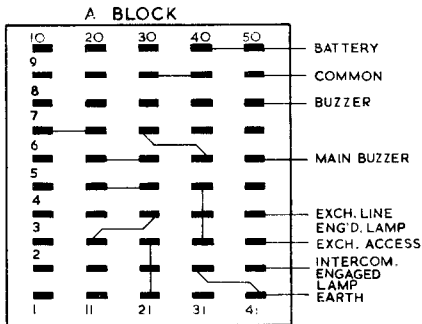
Amend

PAPER

W

### RELAY UNIT Q415 TAG BLOCK STRAPS (NOTE 7)

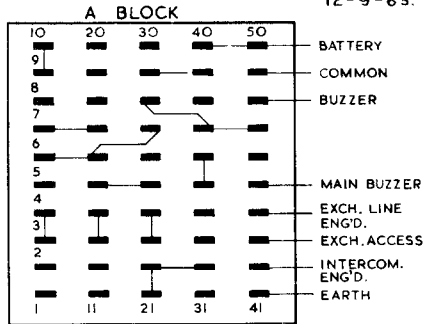
SIG. GROUP A(i) a-A/WE BOTHWAYS



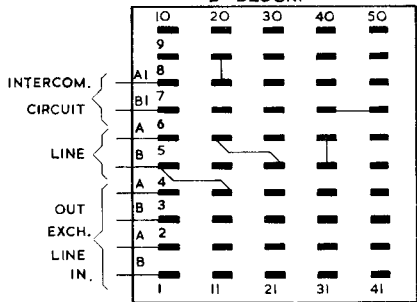
SIG. GROUP A(ii) a-G/AC IN A/WE OUT

**Q(L) 441**

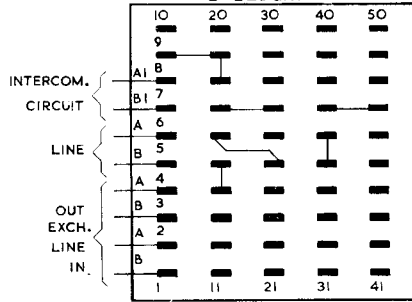
5 PANELS-3  
12-9-63.



**B BLOCK.**



**B BLOCK.**



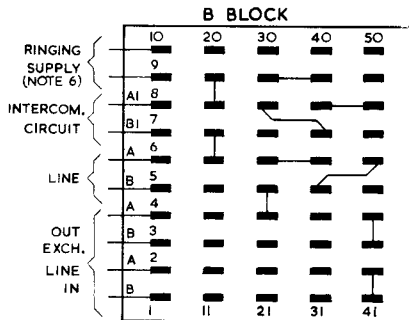
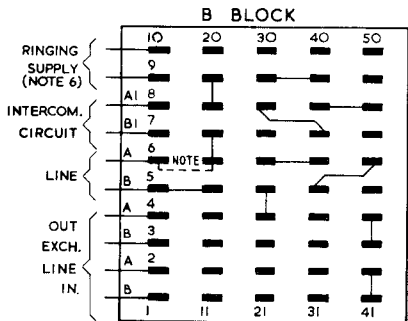
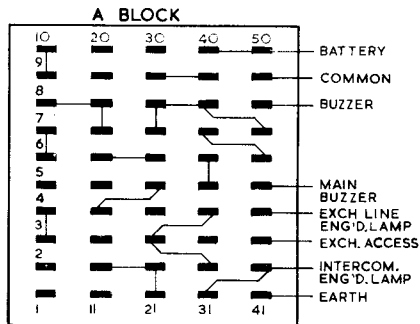
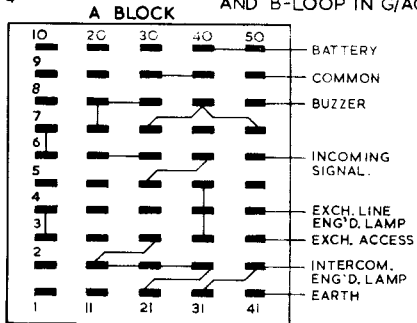
**Q(L)441**

5 PANELS-4

RELAY UNIT Q 415 TAG BLOCK STRAPS (NOTE 7)

SIG. GROUPS A(i)b A/WE IN G/AC OUT.  
AND B-LOOP IN G/AC OUT.

SIG. GROUP A(ii)b -G/AC BOTHWAYS.



NOTE:- INSERT STRAP FOR LOOP INCOMING.

CIRCUIT

GENERAL

SUFF. 2

W

RELAY UNIT Q415 TAG BLOCK STRAPS (NOTE 7)

**QL441**  
5 PANELS 5  
12-9-63.

SIG. GROUP C-G/AC IN LOOP OUT.

SIG. GROUP H-AUTO. BAL. BATT. BOTHWAYS.

