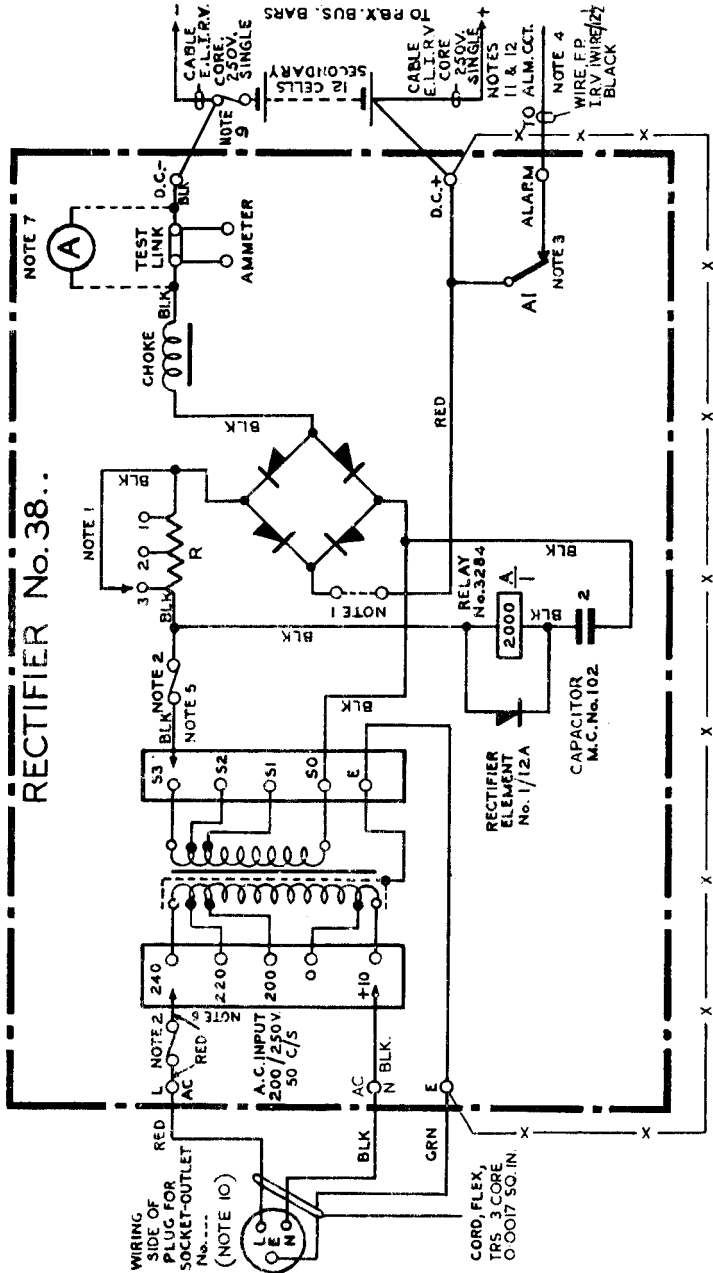


RECTIFIERS No. 38 A, B, C, D & E.  
 FOR P.B.X. INSTALLATIONS REQUIRING 4 - 240 AH.  
 PER DAY AT 22-30V. CONNEXIONS.

N638/O

ISSUE L  
 PAGE 1-3



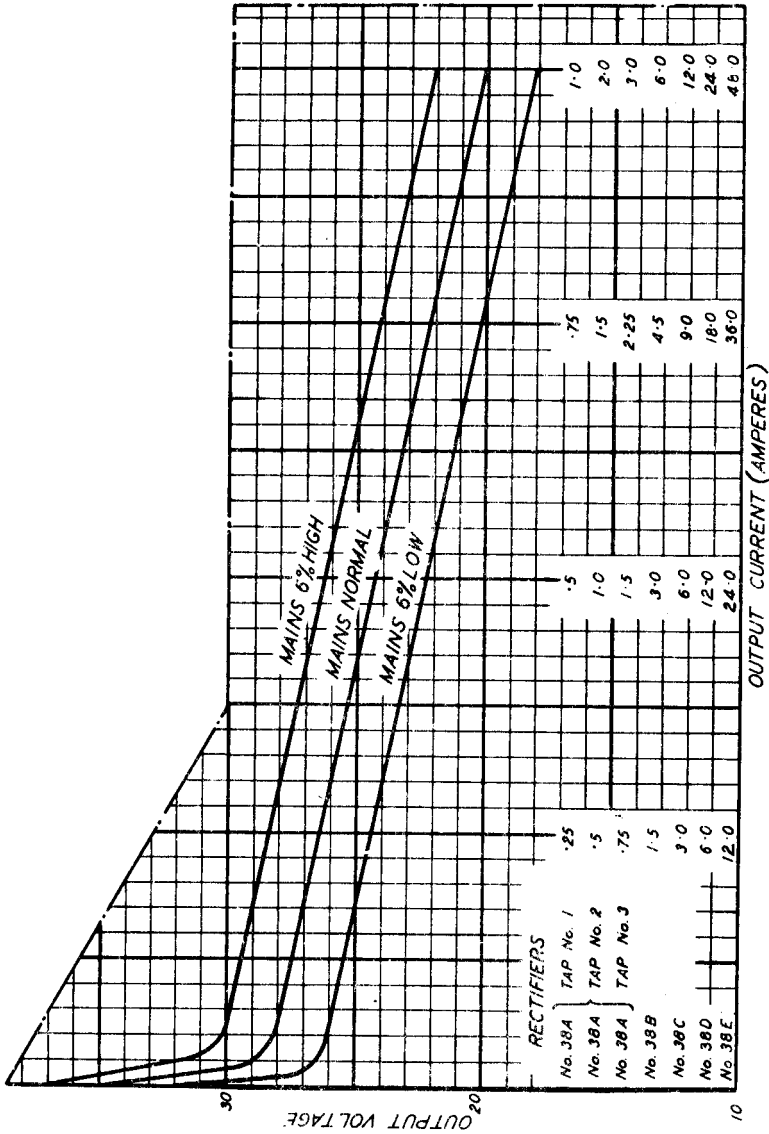
P.O.E.D.

S. BCH.

PAPER:- Y

CIRCULATION  
 GENERAL

ISSUES			
L	NEW FORMAT, MADE YELLOW.		
K	NOTE 11 WITHDRAWN. FUSES 36 & 57 ADDED	K m.a.	2.6.66
J	NOTE 12 AMENDED	K MA	28.4.65
	E.S.R. F.J.J.	K MA	26.11.64
			21.3.38



NOTES:-

- I. RESISTANCE R OF RECTIFIER 38A IS TAPPED AT THREE POINTS AND THE FLEXIBLE CONNEXION SHOULD BE MADE AS FOLLOWS:-  
 DAY LOAD 2-5AH, TAP 1; 4-10 AH, TAP 2; 6-15AH, TAP 3. THE RESPECTIVE POSITIONS OF THE TAPPING BANDS ARE ADJUSTED AT THE WORKS AND MUST NOT BE ALTERED. THE RESISTANCE R OF RECTIFIERS 38B, C, D AND E IS TAPPED AT ONE POINT ONLY AND NO ADJUSTMENT IS PERMISSIBLE. ON SOME RECTIFIERS 38B, C, D AND E THE RESISTANCE MAY BE IN THE ALTERNATIVE POSITION SHOWN ON PAGE 1. THIS IS A MANUFACTURING REQUIREMENT AND HAS NO OTHER SIGNIFICANCE.

2. FUSES.

RECTIFIER No. 38A ON:- TAP No.1 (SEE NOTE 1) TAP No.2 (SEE NOTE 1) TAP No.3 (SEE NOTE 1)	INPUT TO MAINS TRANSFORMER (SEE NOTE 14) 1 FUSE 1/1.5 OR 36A/1.5 1 FUSE 1/1.5 OR 36A/1.5 1 FUSE 1/1.5 OR 36A/1.5	OUTPUT FROM MAINS TRANSFORMER 1 FUSE 1/1.5 OR 36/1.5 1 FUSE 1/1.5 OR 36/1.5 1 FUSE 1/3.0 OR 36/3.0
RECTIFIER No. 38B	1 FUSE 1/3.0 OR 36A/2.0	1 FUSE 20/5 OR 57/10
RECTIFIER No. 38C	1 FUSE 20/3 OR 36A/3.0	1 FUSE 20/10 OR 57/15
RECTIFIER No. 38D	1 FUSE 20/5 OR 36A/5.0	1 FUSE 21/25 OR 57/25
RECTIFIER No. 38E	1 FUSE 20/10 OR FUSE CLIP IN No.10/15	1 FUSE 23/40 OR 57/40

3. CONTACT A1 IS NORMALLY OPERATED.
4. SEE DIAGRAM N2304.
5. THE SECONDARY TAPS ARE FOR ADJUSTMENT AT WORKS & MUST NOT BE ALTERED.
6. MAINS CONNEXION - 200V: 0-200; 210V: +10-200; 220V: 0-220; 230V: +10-220; 240V: 0-240; 250V: +10-240.
7. AMMETER TEST LINK IS REPLACED BY AN AMMETER ON RECTIFIERS No.38 D & E.
8. FUSE RATING IN AMPERES TO BE NUMERICALLY HALF THE AMPERE HOUR CAPACITY OF THE CELLS, OR THE RATED CURRENT CARRYING CAPACITY OF THE MAIN BATTERY LEADS, WHICHEVER IS THE LESSER.
9. TO KEEP THE NOISE LEVEL TO A MINIMUM THE LEADS TO THE LOAD & THE RECTIFIER SHOULD BE TIED AT THE BATTERY, AS SHOWN
10. PLUG TO BE REQUISITIONED TO SUIT SUBSCRIBERS SOCKET - OUTLET. CORD TO BE REQUISITIONED SEPARATELY.

- II. THE BATTERY +VE LEAD IS EARTHED AT THE PBX +VE BUS. BAR (SEE DGM. N962). THE MAINS PROTECTIVE EARTH MUST NOT BE UTILISED FOR THE TELEPHONE SIGNALLING EARTH. AN ENTIRELY INDEPENDENT CONNEXION TO A SEPARATE EARTH & AN ADDITIONAL SPIKE MUST BE PROVIDED. THESE TWO EARTHS SHALL BE CONNECTED TOGETHER AT THE TERMINAL BLOCK OF THE RECTIFIER BY AN INSULATED CONDUCTOR SIMILAR TO THAT USED FOR THE MAINS PROTECTIVE EARTH CONNEXION. SEE WIRING SHOWN THUS-X-X-X-

12. FOR CONDUCTOR SIZES BETWEEN RECTIFIER AND BATTERY, AND BATTERY AND LOAD. SEE E. I. S3320.
13. FUSES AT LEFT OF COLUMN ARE FOR EARLIER SUPPLIES OF RECTIFIER AND FUSES AT RIGHT OF COLUMN ARE FOR RECENT SUPPLIES.

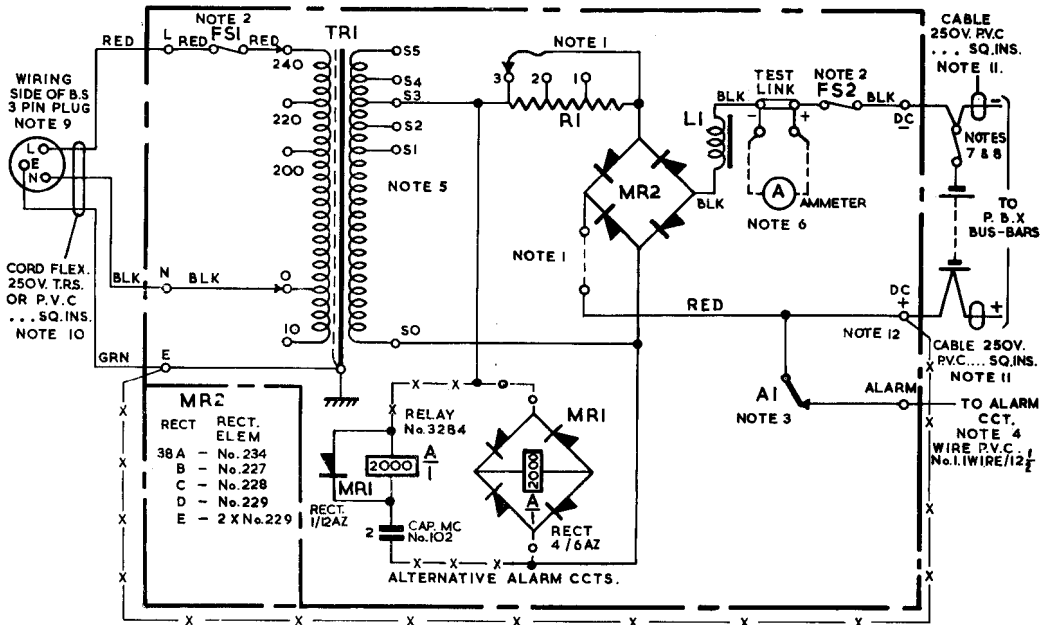
# RECTIFIER No.38... (MARK II)

N638/I  
2 PANELS-1  
22-8-60

GENERAL  
20.11.64 C  
29.11.64 B  
5.9.64. A

NOTE 12 ADDED  
MINOR AMENDMENTS  
MINOR AMENDMENTS.

W



MR2	
RECT.	RECT. ELEM
38A	- No. 234
B	- No. 227
C	- No. 228
D	- No. 229
E	- 2 X No. 229

ALTERNATIVE ALARM CCTS.

# N 638/1

2 PANELS - 2

## NOTES

1. RESISTOR RI OF RECT. No. 38A IS TAPPED AT THREE POINTS AND THE FLEXIBLE CONNEXION SHOULD BE MADE AS FOLLOWS: DAY LOAD 2-5 Ah, TAP 1; 4-10 Ah TAP 2; 6-15 Ah TAP 3. THE RESPECTIVE POSITIONS OF THE TAPPING LEADS ARE ADJUSTED AT THE WORKS AND MUST NOT BE ALTERED. THE RESISTOR RI OF RECTIFIERS No. 38B-E IS TAPPED AT ONE POINT ONLY AND NO ADJUSTMENT IS PERMISSIBLE. ON SOME RECTIFIERS No. 38B-E THE RESISTOR MAY BE IN THE ALTERNATIVE POSITION SHOWN IN CIRCUIT. THIS IS A MANUFACTURING REQUIREMENT AND HAS NO OTHER SIGNIFICANCE.

### 2. FUSES.

RECTIFIER No. 38A ON TAP No.1 (SEE NOTE 1)	FS1	FS2
TAP No.2 (SEE NOTE 1)	FUSE No.36A/1.5	FUSE No.36/1.5 FUSE No.36/1.5
TAP No.3 (SEE NOTE 1)		FUSE No.36/3.0
RECTIFIER No. 38 B	FUSE No.36A/2.0	FUSE No. 57/10
" " 38C	" " 36A/3.0	" " 57/15
" " 38D	" " 36A/5.0	" " 57/30
" " 38E	" CLIP IN No.10/15	" " 57/60

- CONTACT A1 IS NORMALLY OPERATED.
- SEE DIAGRAM N 2304.
- THE SECONDARY TAPS ARE FOR ADJUSTMENT AT WORKS AND SHOULD NOT NORMALLY NEED TO BE ALTERED.
- AMMETER TEST LINK IS REPLACED BY AN AMMETER ON RECTIFIER No. 38D & E.
- FUSE RATING IN AMPERES TO BE NUMERICALLY HALF THE AMPERE HOUR CAPACITY OF THE CELLS, OR THE RATED CURRENT CARRYING CAPACITY OF THE MAIN BATTERY LEADS WHICHEVER IS LEAST.

- TO KEEP THE NOISE LEVEL TO A MINIMUM THE LEADS TO THE LOAD AND THE RECTIFIER SHOULD BE FEED AT THE BATTERY AS SHOWN.
- 3 PIN PLUG TO BE REQUISITIONED TO SUIT SUBS B.S. SOCKET THE CONNEXIONS MUST BE MADE SO THAT THE 'LIVE' MAINS CONDUCTOR, THE 'NEUTRAL' CONDUCTOR AND THE 'EARTH' CONDUCTOR ARE CONNECTED DIRECTLY TO L.N&E TERMINALS OF THE RECTIFIER.
- CORD FLEX 250V T.R.S. OR PVC..... SQ. IN. TO BE REQUISITIONED SEPARATELY, FOR THE RECTIFIERS No. 38A,B,C&D 0-0006 SQ. IN. CONDUCTORS SHOULD BE USED. FOR THE RECTIFIERS No. 38E 0-0030 SQ. IN. CONDUCTOR SHOULD BE USED. ALTERNATIVELY THE RECTIFIERS No. 38.... MAY BE CABLED AND CONDUCTED.
- THE CONDUCTOR SIZES BETWEEN THE RECTIFIER AND BATTERY, AND THE BATTERY AND LOAD TO BE IN ACCORDANCE WITH E.I. POWER GEN. S 3320.
- THE BATTERY +VE LEAD IS EARTHED AT THE P.B.X. BUS BAR (SEE DGM. N 962.). THE MAINS PROTECTIVE EARTH MUST NOT BE UTILISED FOR THE TELEPHONE SIGNALLING EARTH. AN ENTIRELY INDEPENDENT CONNEXION TO A SEPARATE EARTH e.g. AN ADDITIONAL SPIKE MUST BE PROVIDED. THESE TWO EARTHS SHALL BE CONNECTED TOGETHER AT THE TERMINAL BLOCK OF THE RECTIFIER BY AN INSULATED CONDUCTOR SIMILAR TO THAT USED FOR THE MAINS PROTECTED EARTH CONNEXION SEE WIRING SHOWN THUS —X—X—.