

B.R.1565 (ADDM)

ADDENDUM N° 2 TO B.R.1565

**HANDBOOK FOR
TYPE 618 AND RECEIVER OUTFIT CAS**

**HF TRANSMITTER (A.P. 100333A)
AND
MF TRANSMITTER (A.P. 100334A)**

ANY SUGGESTIONS FOR AMENDMENTS OR ADDITIONS TO THIS BOOK
SHOULD BE SUBMITTED TO THE CAPTAIN SUPERINTENDENT, ADMIRALTY
SURFACE WEAPONS ESTABLISHMENT, THROUGH THE USUAL CHANNELS.

**WEAPONS DEPARTMENT · ADMIRALTY
JAN., 1960 (W. 3889/59)**

^u CHANGES ^u

★ ~~AMENDMENTS~~ ★

When an amendment to this handbook is promulgated the brief details required below are to be filled in.

CHANGE AMENDMENT No.	AUTHORITY (A.F.O. No. ETC.)	DATE OF INSERTION	INITIALS
ONE	P392/61	9-1-62	Geo. Temperley ^{LTD}
2	P90/64	23-7-64	H. G. R. (G)

Admiralty, S.W.1.

January, 1960

W. 3889/59

B.R. 1565 Addm. "Addendum No. 2 to B.R. 1565 Handbook for Type 618 and Receiver Outfit CAS 1959" having been approved by My Lords Commissioners of the Admiralty is hereby promulgated.

By Command of Their Lordships



A handwritten signature in cursive script, appearing to read "J. S. Lang", is written above a horizontal line.

To:-

Flag Officers and
Commanding Officers of
H.M. Ships and
Vessels concerned.

B . R . 1 5 6 5 A D D M .

A D D E N D U M N O . 2 T O B . R . 1 5 6 5

H F T R A N S M I T T E R (A . P . 1 0 0 3 3 3 A)

A N D

M F T R A N S M I T T E R (A . P . 1 0 0 3 3 4 A)

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2. A.P.100333A HF Transmitter - Layout Diagram
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HF TRANSMITTER (A.P. 100333A)

AND

MF TRANSMITTER (A.P. 100334A)

Introduction

1. As from the beginning of 1959, all future production of HF and MF transmitters of Type 618 will be of the 'A' pattern. A summary of the differences between the original transmitters and the 'A' pattern is listed below. Apart from the keying circuit changes, the differences are mainly confined to improvements to various components and mechanical features which have given trouble since the introduction of these transmitters.

2. HF Transmitter A.P.100333A

- (a) Redesigned keying and muting circuits.
- (b) Redisposition of components to avoid overheating of transformer TR2.
- (c) Up-grading of capacitors C9 and C71.
- (d) Geared tuning controls fitted in place of the friction type.
- (e) All Mark 4 plugs and sockets are of the 'Red splash' type.
- (f) Relays are of plug-in type for easy changeability.
- (g) Wire-wound resistors of improved type fitted.

3. MF Transmitter A.P.100334A

- (a) Redesigned keying and muting circuits.
- (b) Redesigned variometer assembly.
- (c) Resistor R4 ohmic value and wattage increased.
- (d) Geared tuning controls fitted.
- (e) All Mark 4 plugs and sockets are of 'Red splash' type.
- (f) Relays are of plug-in type.
- (g) Wire-wound resistors of improved type fitted.

4. Power Unit A.P.100336

Although not given an 'A' suffix letter, all future production of this unit will be fitted with 'Red splash' plugs and sockets and improved wire-wound resistors. The 400-volt and 300-volt d.c. outputs have been modified to provide a separate fuse in each line.

Keying Circuit Changes

5. Complaints of excessive key click interference from Type 618 transmitters have called for a complete redesign of the keying circuits. As a result of these changes, the keying is accomplished by the removal of a negative bias from the grids of the first (and second in the HF transmitter) stages by a high-speed relay. A second high-speed relay, operated in parallel with the keying relay, mutes the receiver by inserting an 100-ohm resistor across the telephone output of the receiver.
6. The Send-Receive relay now functions in a manner normal to this type of relay; one contact transferring the aerial from receiver to transmitter and the second contact earthing the input to the receiver when the relay is operated.
7. The modifications have resulted in some reduction of key clock interference when the transmitters are working Send-Receive operation and further reduction is possible when the transmitters are fitted without the associated Receiver Outfit CAS. In such installations, the link normally fitted between terminals L and T in the A.P.61164 Junction Box, 32-Way is now fitted between terminals L and H. When so linked, the Send-Receive relay is operated in the TRANSMIT position when the control switch on the Power Unit is set to the READY position and only the keying and muting relays are 'keyed'.
8. In the event of both MF and HF transmitters being fitted in one installation without the associated receivers, both units must be 'A' pattern before the facility described above can be used.
9. In all other installations, the 'A' pattern of either transmitter is a direct replacement for a non-'A' pattern and no change of wiring is necessary.

Circuit Changes

10. HF Transmitter (See Fig. 1)
 - (a) Pattern Z530040 Relay fitted as muting relay RLD and R87, 100 ohms fitted as a muting resistor.
 - (b) Keying Relay RLB Pattern Z530039 replaced by Pattern Z530040 and series resistor R73 removed. Capacitor C75 fitted across the relay contact.
 - (c) Valve V4 buffer stage grid resistor R83 disconnected from the -60 volt line and connected to the M.O. keying line.
 - (d) Wiring to RLC2 and SWEda disconnected and resistors R28 and R74 removed.
 - (e) 250-volt supply to V101 and V102 in the receiver is completed by cross-connecting PL9A and PL9B.
 - (f) Relay contacts RLC1 and RLC2 rewired so as to earth the receiver input when the relay is operated. Series resistor of relay increased to 270 ohms.
 - (g) The new components layout is shown in Fig. 2.
11. MF Transmitter (See Fig. 3)
 - (a) Pattern Z530040 Relay fitted as muting relay RLD and R49, 100 ohms fitted as a muting resistor.

- (b) Resistor R48 100k fitted between M.O. grid resistor R6 and -60 volt line. Keying relay RLB fitted to connect R6 to earth and C38 fitted across the contact.
- (c) Relay contact RLA2 disconnected and contacts RLA1 and RLA2 rewired to earth the receiver input when the relay is operated. Series resistor of RLA increased to 270 ohms.
- (d) 250-volt supply to V101 and V102 in the receiver completed by cross-connecting PL14A and PL14B.
- (e) Keying and muting relays connected between PL14F/P and PL13F.
- (f) The new components layout is shown in Fig. 4.

COMPONENT CHANGES

12. HF Transmitter A.P.100333A

C33	Capacitor, fixed	Z115630	0.05 μ F	20%	200V
C34	Capacitor, fixed	Z115630	0.05 μ F	20%	200V
C36	Capacitor, fixed	Z115630	0.05 μ F	20%	200V
C48	Capacitor, fixed	Z115552	0.01 μ F	20%	350V
C50	Capacitor, Fixed	Z115551	0.002 μ F	20%	500V
C51	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C52	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C53	Capacitor, fixed	Z115552	0.01 μ F	20%	350V
C54	Capacitor, fixed	Z115552	0.01 μ F	20%	350V
C55	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C56	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C57	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C58	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C59	Capacitor, fixed	Z115552	0.01 μ F	20%	350V
C62	Capacitor, fixed	Z115551	0.002 μ F	20%	500V
C71	Capacitor, fixed	911-5660	1000 pF	10%	750V
C75	Capacitor, fixed	Z115631	0.1 μ F	20%	200V
R3	Resistor	Z117900	2.4k	5%	6W
R13	Resistor	Z113518	12k	5%	4.5W
R14	Resistor	Z113425	15k	5%	6W
R24	Resistor	Z113411	3.9k	5%	6W
R28	Resistor	Not fitted in 'A' pattern			
R70	Resistor	Z113417	6.8k	5%	6W
R71	Resistor	Z113417	6.8k	5%	6W
R72	Resistor	Z113383	270	5%	6W
R73	Resistor	Not fitted in 'A' pattern			
R74	Resistor	Not fitted in 'A' pattern			
R87	Resistor	Z221110	100	10%	$\frac{1}{4}$ W
RLB	Keying relay	Z530040 5945-99-012-8201			
RLD	Muting relay	Z530040 5945-99-012-8201			
-	Socket for relays RLB/RLD	5935-Z539001			
PL9	Plug, 18-way, fixed	5935-A.P.208676			
PL10	Plug, 12-way, fixed	5935-A.P.208655			
	FLEXIBLE CONDUIT (EDDYSTONE Type 893)		5999-99-580-0003		

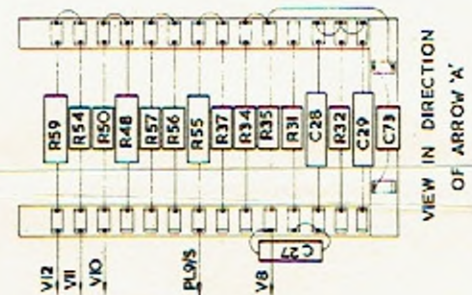
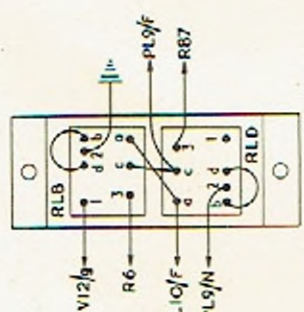
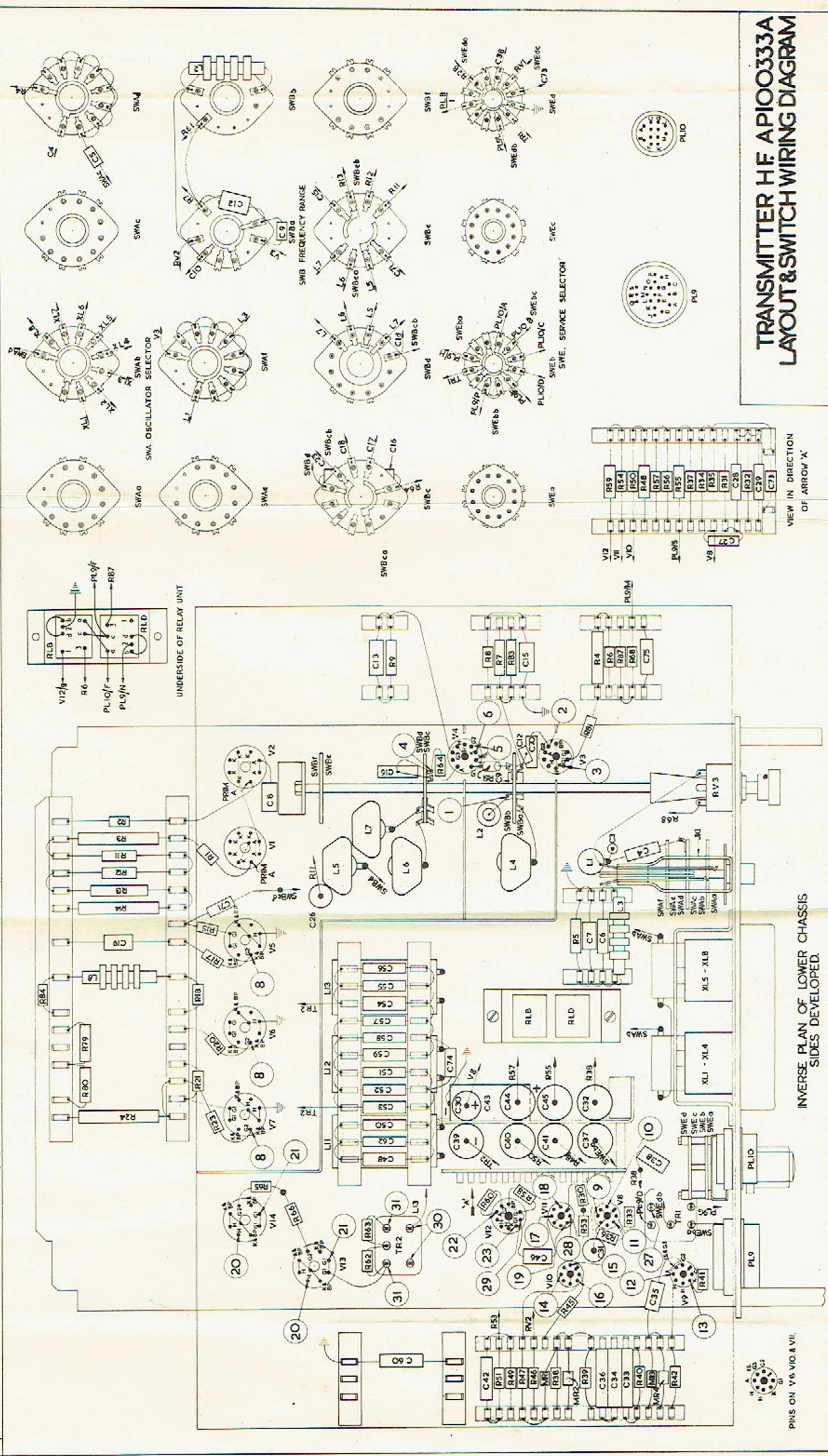
13. MF Transmitter A.P.100334A

R4A	Resistor	Z117901	5.1k	5%	6W
R4B	Resistor	Z117901	5.1k	5%	6W
R10	Resistor	Z113494	2k	5%	4.5W
R21	Resistor	Z113411	3.9k	5%	6W
R35	Resistor	Z113383	270	5%	6W
R41	Resistor	Z113511	10k	5%	4.5W
R48	Resistor	Z223038	100k	10%	$\frac{1}{4}$ W
R49	Resistor	Z221110	100	10%	$\frac{1}{4}$ W
C11	Capacitor, fixed	Z115549	0.001 μ F	20%	500V
C38	Capacitor, fixed	Z115625	0.01 μ F	20%	350V
L8	Transformer, variable r.f.	A.P.102921A			
SWC	Switch, c.w., m.c.w.	Z510301			
RLB	Keying relay	Z530040	5945-99-012-8201		
RLD	Muting relay	Z530040	5945-99-012-8201		
-	Socket for relays RLB/RLD	5935-Z539001			
PL13	Plug, 12-way, fixed	5935-A.P.208655			
PL14	Plug, 18-way, fixed	5935-A.P.208676			

14. Power Unit A.P.100336

R1	Resistor	Z113431	27k	5%	6W
R5	Resistor	Z113417	6.8k	5%	6W
R6	Resistor	Z117900	2.4k	5%	6W
R7	Resistor	Z113370	75	5%	6W
R8	Resistor	Z113370	75	5%	6W
R11	Resistor	Z113382	250	5%	6W
R12	Resistor	Z113388	430	5%	6W
R13	Resistor	Z113387	390	5%	6W
R14	Resistor	Z113397	1k	5%	6W
R15	Resistor	Z113397	1k	5%	6W
C12	Capacitor, fixed	Z145508	25 μ F	-20 +100%	50V
PL1	Plug, 2-way, fixed	5935-A.P.208600			
PL4	Plug, 25-way, fixed	5935-A.P.208682			
PL7	Plug, 18-way, fixed	5935-A.P.208676			
PL8	Plug, 18-way, free	5935-A.P.208788			
SK2	Socket, 12-way fixed	5935-A.P.208755			
SK3	Socket, 18-way fixed	5935-A.P.208766			
SK5	Socket, 12-way, fixed	5935-972-9114			
SK7	Socket, 18-way, free	5935-A.P.208688			
SK8	Socket, 18-way, fixed	5935-A.P.208776			

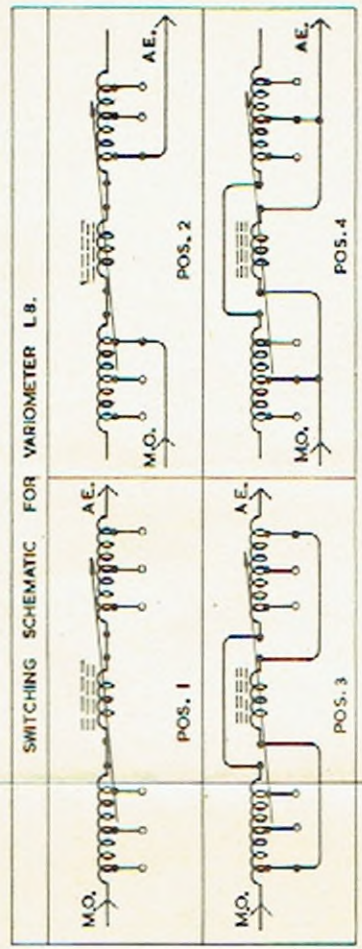
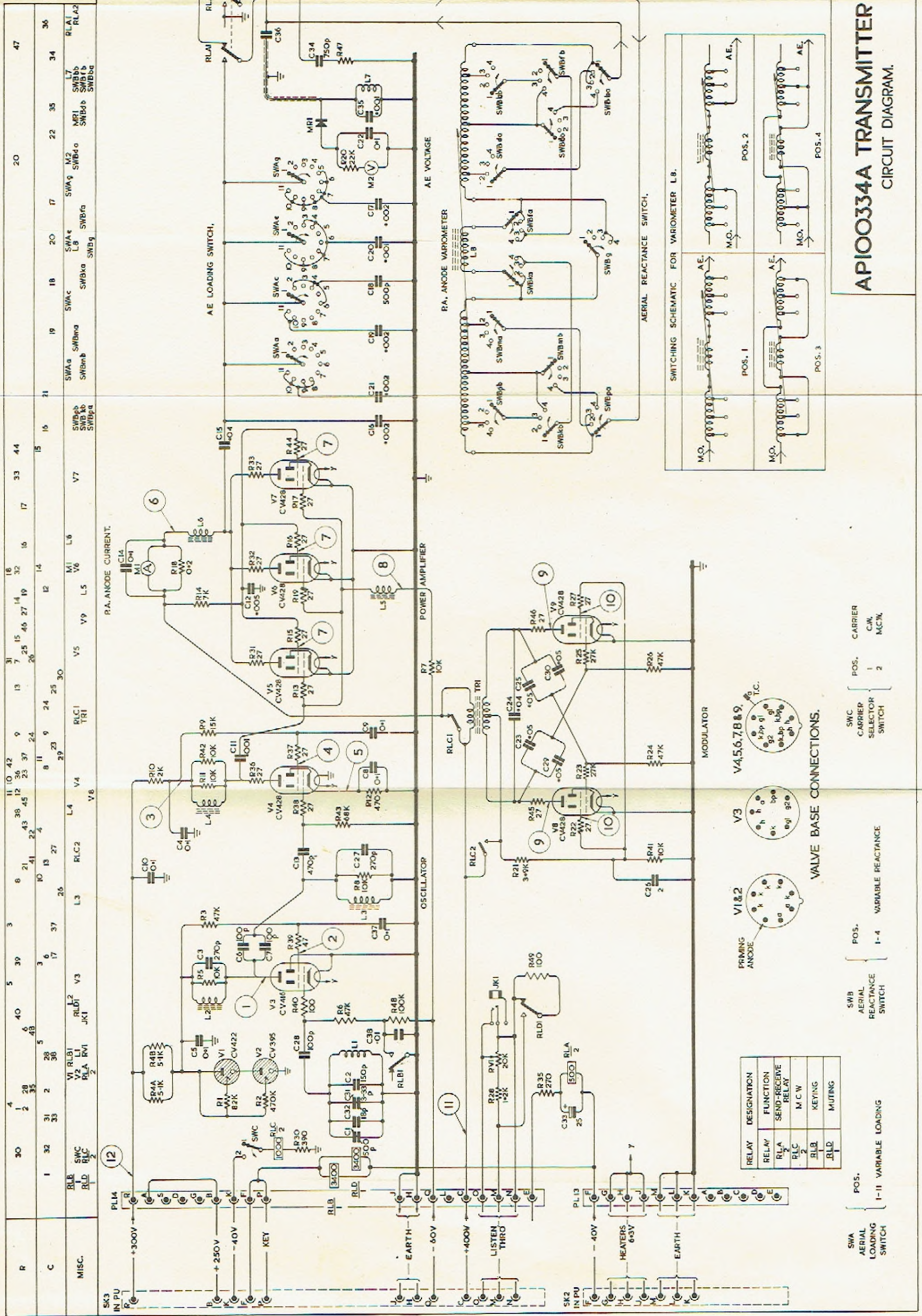
R	51 49 47 46 38 39 40 42	60	45 41	35	31	24	80	79	84	14	13	12	11	3	2	6-9	59 54 50 48 57 56 55 37 34 35 31 32	C	5	12	9	16	L2	MRS				
C	42 36 34 33	60	46	35	31	38	30 33 39 41 44	30 33 39 41 44	30 33 39 41 44	71	26	3	7	26	3	61	28 16 27 23											
MSC	MR1 MR2 MR3 MR4	V14 TR2 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	V14 V13 V12 V11 V10 V9 PL9	SWB1 L7 L5 L4 L3 L2 L1 X0 X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 X12 X13 X14 X15 X16 X17 X18 X19 X20 X21 X22 X23 X24 X25 X26 X27 X28 X29 X30 X31 X32 X33 X34 X35 X36 X37 X38 X39 X40 X41 X42 X43 X44 X45 X46 X47 X48 X49 X50 X51 X52 X53 X54 X55 X56 X57 X58 X59 X60 X61 X62 X63 X64 X65 X66 X67 X68 X69 X70 X71 X72 X73 X74 X75 X76 X77 X78 X79 X80 X81 X82 X83 X84 X85 X86 X87 X88 X89 X90 X91 X92 X93 X94 X95 X96 X97 X98 X99 X100																		



**TRANSMITTER HF APIO0333A
LAYOUT & SWITCH WIRING DIAGRAM**

INVERSE PLAN OF LOWER CHASSIS
SIDES DEVELOPED.





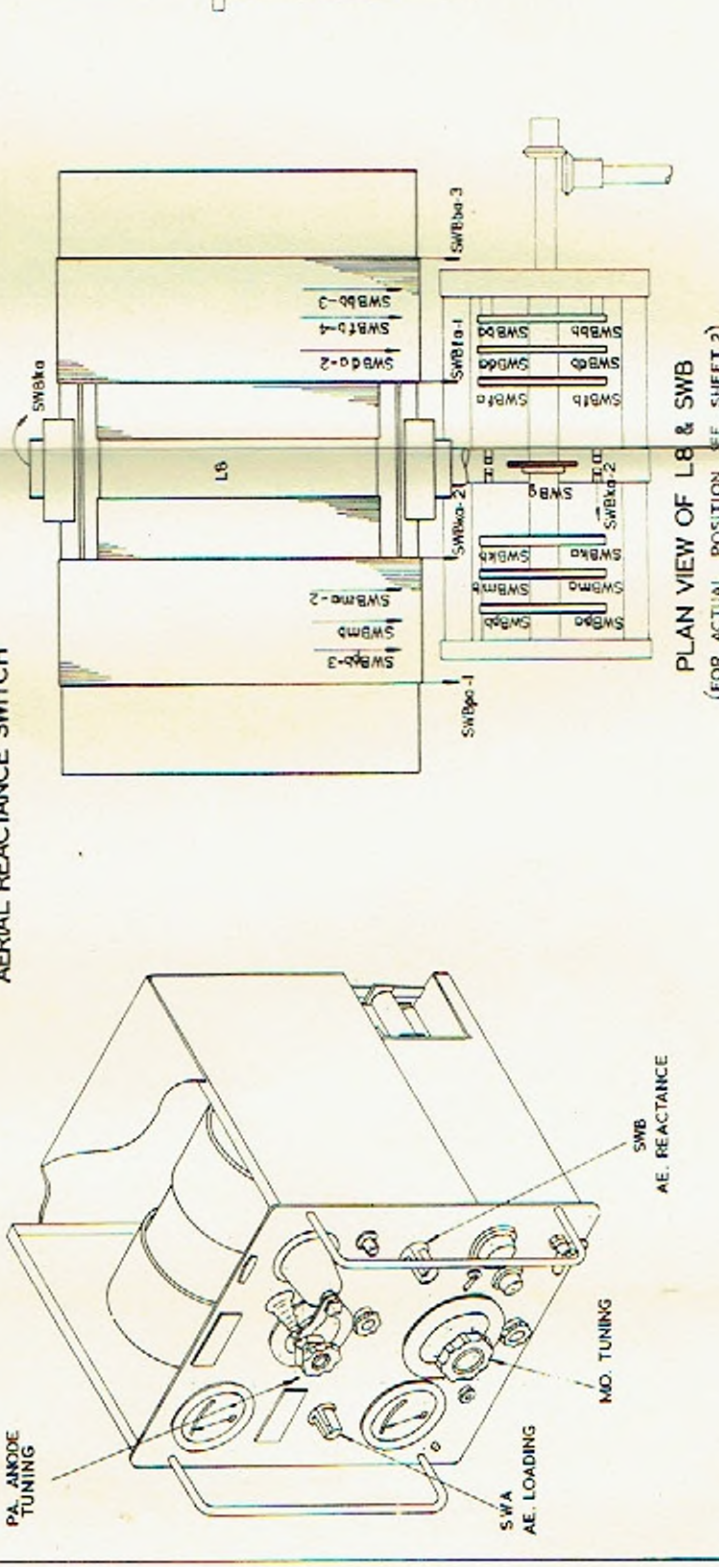
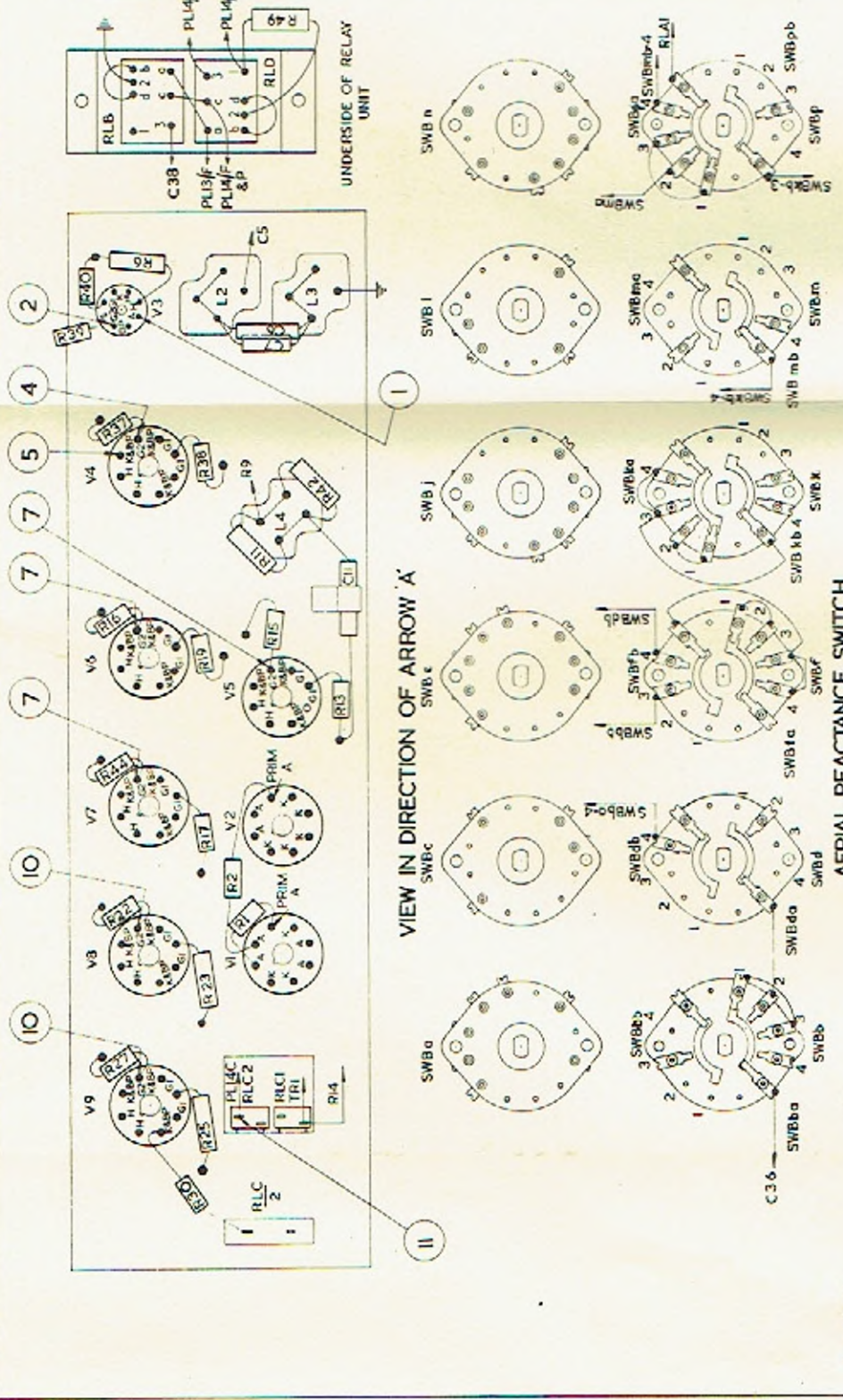
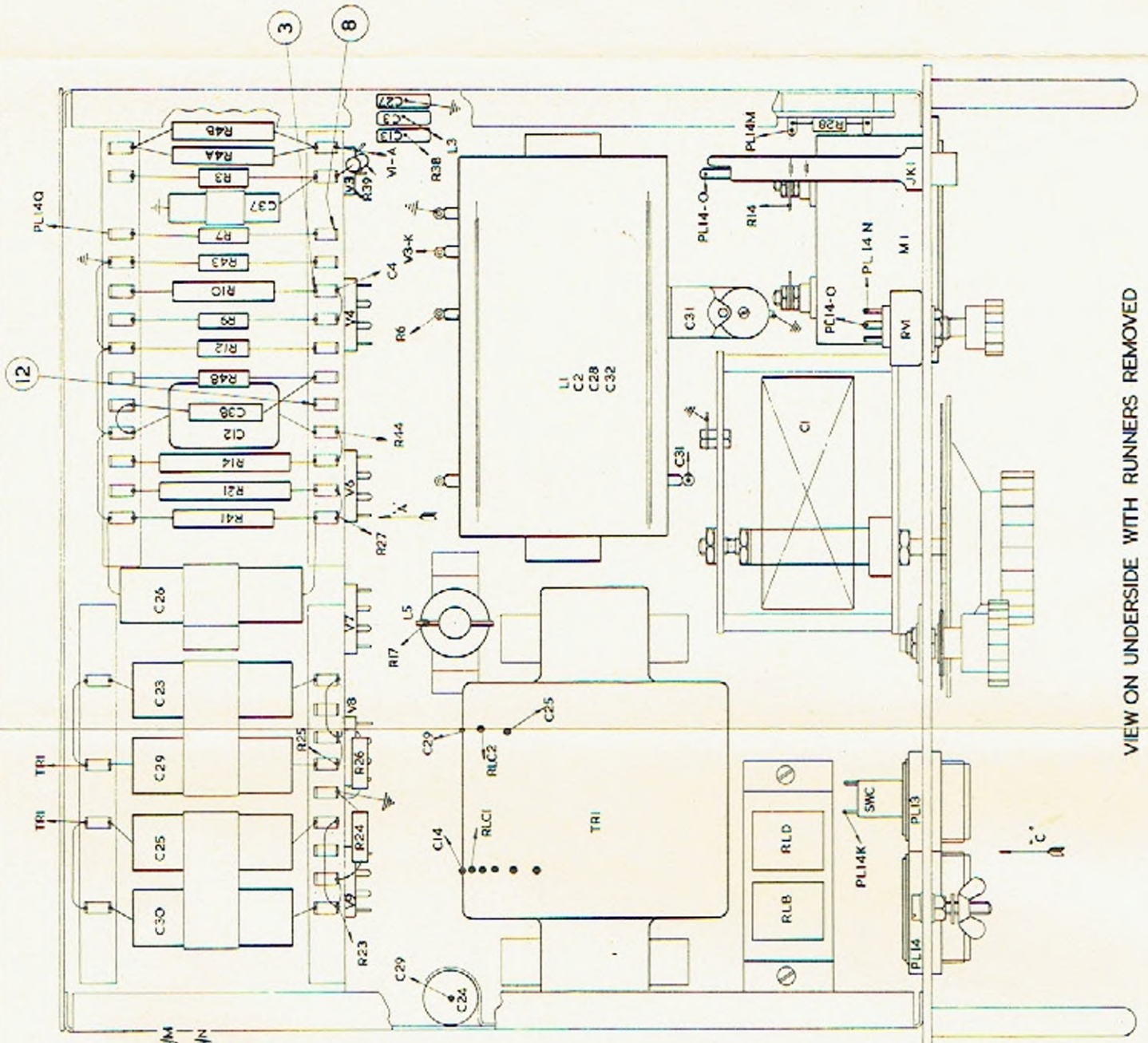
RELAY DESIGNATION	FUNCTION
RLA	SEND-RECEIVE RELAY
PLC	M.C.W.
RLB	KEYING
RLD	MUTING

- POS. 1-11 VARIABLE LOADING
- SWA AERIAL LOADING SWITCH
- SWB AERIAL REACTANCE SWITCH
- POS. 1-4 VARIABLE REACTANCE
- SWC CARRIER SELECTOR SWITCH
- POS. 1 2 C.M. M.C.W.

API00334A TRANSMITTER M.F.
CIRCUIT DIAGRAM.

R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
MISC.	RLB	SWC	RLD	RLC	V1	RLB1	V2	RLA	RLV1	JK1	L2	V3	RLD1	V4	RLC2	L4	V4	RLC1	TR1	V5	V9	L5	V6	M1	L6	V7	SWB6b	SWB6c	SWB6d	SWA9	M2	SWA9	SWB6a	SWB6g	SWA9	SWB6e	SWB6f	SWB6h	SWB6i	SWB6j	SWB6k	SWB6l	SWB6m	SWB6n	SWB6o	SWB6p	SWB6q	SWB6r	SWB6s	SWB6t	SWB6u	SWB6v	SWB6w	SWB6x	SWB6y	SWB6z	SWB6aa	SWB6ab	SWB6ac	SWB6ad	SWB6ae	SWB6af	SWB6ag	SWB6ah	SWB6ai	SWB6aj	SWB6ak	SWB6al	SWB6am	SWB6an	SWB6ao	SWB6ap	SWB6aq	SWB6ar	SWB6as	SWB6at	SWB6au	SWB6av	SWB6aw	SWB6ax	SWB6ay	SWB6az	SWB6ba	SWB6bb	SWB6bc	SWB6bd	SWB6be	SWB6bf	SWB6bg	SWB6bh	SWB6bi	SWB6bj	SWB6bk	SWB6bl	SWB6bm	SWB6bn	SWB6bo	SWB6bp	SWB6bq	SWB6br	SWB6bs	SWB6bt	SWB6bu	SWB6bv	SWB6bw	SWB6bx	SWB6by	SWB6bz	SWB6ca	SWB6cb	SWB6cc	SWB6cd	SWB6ce	SWB6cf	SWB6cg	SWB6ch	SWB6ci	SWB6cj	SWB6ck	SWB6cl	SWB6cm	SWB6cn	SWB6co	SWB6cp	SWB6cq	SWB6cr	SWB6cs	SWB6ct	SWB6cu	SWB6cv	SWB6cw	SWB6cx	SWB6cy	SWB6cz	SWB6da	SWB6db	SWB6dc	SWB6dd	SWB6de	SWB6df	SWB6dg	SWB6dh	SWB6di	SWB6dj	SWB6dk	SWB6dl	SWB6dm	SWB6dn	SWB6do	SWB6dp	SWB6dq	SWB6dr	SWB6ds	SWB6dt	SWB6du	SWB6dv	SWB6dw	SWB6dx	SWB6dy	SWB6dz	SWB6ea	SWB6eb	SWB6ec	SWB6ed	SWB6ee	SWB6ef	SWB6eg	SWB6eh	SWB6ei	SWB6ej	SWB6ek	SWB6el	SWB6em	SWB6en	SWB6eo	SWB6ep	SWB6eq	SWB6er	SWB6es	SWB6et	SWB6eu	SWB6ev	SWB6ew	SWB6ex	SWB6ey	SWB6ez	SWB6fa	SWB6fb	SWB6fc	SWB6fd	SWB6fe	SWB6ff	SWB6fg	SWB6fh	SWB6fi	SWB6fj	SWB6fk	SWB6fl	SWB6fm	SWB6fn	SWB6fo	SWB6fp	SWB6fq	SWB6fr	SWB6fs	SWB6ft	SWB6fu	SWB6fv	SWB6fw	SWB6fx	SWB6fy	SWB6fz	SWB6ga	SWB6gb	SWB6gc	SWB6gd	SWB6ge	SWB6gf	SWB6gg	SWB6gh	SWB6gi	SWB6gj	SWB6gk	SWB6gl	SWB6gm	SWB6gn	SWB6go	SWB6gp	SWB6gq	SWB6gr	SWB6gs	SWB6gt	SWB6gu	SWB6gv	SWB6gw	SWB6gx	SWB6gy	SWB6gz	SWB6ha	SWB6hb	SWB6hc	SWB6hd	SWB6he	SWB6hf	SWB6hg	SWB6hi	SWB6hj	SWB6hk	SWB6hl	SWB6hm	SWB6hn	SWB6ho	SWB6hp	SWB6hq	SWB6hr	SWB6hs	SWB6ht	SWB6hu	SWB6hv	SWB6hw	SWB6hx	SWB6hy	SWB6hz	SWB6ia	SWB6ib	SWB6ic	SWB6id	SWB6ie	SWB6if	SWB6ig	SWB6ih	SWB6ii	SWB6ij	SWB6ik	SWB6il	SWB6im	SWB6in	SWB6io	SWB6ip	SWB6iq	SWB6ir	SWB6is	SWB6it	SWB6iu	SWB6iv	SWB6iw	SWB6ix	SWB6iy	SWB6iz	SWB6ja	SWB6jb	SWB6jc	SWB6jd	SWB6je	SWB6jf	SWB6jg	SWB6jh	SWB6ji	SWB6jj	SWB6jk	SWB6jl	SWB6jm	SWB6jn	SWB6jo	SWB6jp	SWB6jq	SWB6jr	SWB6js	SWB6jt	SWB6ju	SWB6jv	SWB6jw	SWB6jx	SWB6jy	SWB6jz	SWB6ka	SWB6kb	SWB6kc	SWB6kd	SWB6ke	SWB6kf	SWB6kg	SWB6kh	SWB6ki	SWB6kj	SWB6kl	SWB6km	SWB6kn	SWB6ko	SWB6kp	SWB6kq	SWB6kr	SWB6ks	SWB6kt	SWB6ku	SWB6kv	SWB6kw	SWB6kx	SWB6ky	SWB6kz	SWB6la	SWB6lb	SWB6lc	SWB6ld	SWB6le	SWB6lf	SWB6lg	SWB6lh	SWB6li	SWB6lj	SWB6lk	SWB6ll	SWB6lm	SWB6ln	SWB6lo	SWB6lp	SWB6lq	SWB6lr	SWB6ls	SWB6lt	SWB6lu	SWB6lv	SWB6lw	SWB6lx	SWB6ly	SWB6lz	SWB6ma	SWB6mb	SWB6mc	SWB6md	SWB6me	SWB6mf	SWB6mg	SWB6mh	SWB6mi	SWB6mj	SWB6mk	SWB6ml	SWB6mm	SWB6mn	SWB6mo	SWB6mp	SWB6mq	SWB6mr	SWB6ms	SWB6mt	SWB6mu	SWB6mv	SWB6mw	SWB6mx	SWB6my	SWB6mz	SWB6na	SWB6nb	SWB6nc	SWB6nd	SWB6ne	SWB6nf	SWB6ng	SWB6nh	SWB6ni	SWB6nj	SWB6nk	SWB6nl	SWB6nm	SWB6nn	SWB6no	SWB6np	SWB6nq	SWB6nr	SWB6ns	SWB6nt	SWB6nu	SWB6nv	SWB6nw	SWB6nx	SWB6ny	SWB6nz	SWB6oa	SWB6ob	SWB6oc	SWB6od	SWB6oe	SWB6of	SWB6og	SWB6oh	SWB6oi	SWB6oj	SWB6ok	SWB6ol	SWB6om	SWB6on	SWB6oo	SWB6op	SWB6oq	SWB6or	SWB6os	SWB6ot	SWB6ou	SWB6ov	SWB6ow	SWB6ox	SWB6oy	SWB6oz	SWB6pa	SWB6pb	SWB6pc	SWB6pd	SWB6pe	SWB6pf	SWB6pg	SWB6ph	SWB6pi	SWB6pj	SWB6pk	SWB6pl	SWB6pm	SWB6pn	SWB6po	SWB6pp	SWB6pq	SWB6pr	SWB6ps	SWB6pt	SWB6pu	SWB6pv	SWB6pw	SWB6px	SWB6py	SWB6pz	SWB6qa	SWB6qb	SWB6qc	SWB6qd	SWB6qe	SWB6qf	SWB6qg	SWB6qh	SWB6qi	SWB6qj	SWB6qk	SWB6ql	SWB6qm	SWB6qn	SWB6qo	SWB6qp	SWB6qq	SWB6qr	SWB6qs	SWB6qt	SWB6qu	SWB6qv	SWB6qw	SWB6qx	SWB6qy	SWB6qz	SWB6ra	SWB6rb	SWB6rc	SWB6rd	SWB6re	SWB6rf	SWB6rg	SWB6rh	SWB6ri	SWB6rj	SWB6rk	SWB6rl	SWB6rm	SWB6rn	SWB6ro	SWB6rp	SWB6rq	SWB6rr	SWB6rs	SWB6rt	SWB6ru	SWB6rv	SWB6rw	SWB6rx	SWB6ry	SWB6rz	SWB6sa	SWB6sb	SWB6sc	SWB6sd	SWB6se	SWB6sf	SWB6sg	SWB6sh	SWB6si	SWB6sj	SWB6sk	SWB6sl	SWB6sm	SWB6sn	SWB6so	SWB6sp	SWB6sq	SWB6sr	SWB6ss	SWB6st	SWB6su	SWB6sv	SWB6sw	SWB6sx	SWB6sy	SWB6sz	SWB6ta	SWB6tb	SWB6tc	SWB6td	SWB6te	SWB6tf	SWB6tg	SWB6th	SWB6ti	SWB6tj	SWB6tk	SWB6tl	SWB6tm	SWB6tn	SWB6to	SWB6tp	SWB6tq	SWB6tr	SWB6ts	SWB6tt	SWB6tu	SWB6tv	SWB6tw	SWB6tx	SWB6ty	SWB6tz	SWB6ua	SWB6ub	SWB6uc	SWB6ud	SWB6ue	SWB6uf	SWB6ug	SWB6uh	SWB6ui	SWB6uj	SWB6uk	SWB6ul	SWB6um	SWB6un	SWB6uo	SWB6up	SWB6uq	SWB6ur	SWB6us	SWB6ut	SWB6uu	SWB6uv	SWB6uw	SWB6ux	SWB6uy	SWB6uz	SWB6va	SWB6vb	SWB6vc	SWB6vd	SWB6ve	SWB6vf	SWB6vg	SWB6vh	SWB6vi	SWB6vj	SWB6vk	SWB6vl	SWB6vm	SWB6vn	SWB6vo	SWB6vp	SWB6vq	SWB6vr	SWB6vs	SWB6vt	SWB6vu	SWB6vv	SWB6vw	SWB6vx	SWB6vy	SWB6vz	SWB6wa	SWB6wb	SWB6wc	SWB6wd	SWB6we	SWB6wf	SWB6wg	SWB6wh	SWB6wi	SWB6wj	SWB6wk	SWB6wl	SWB6wm	SWB6wn	SWB6wo	SWB6wp	SWB6wq	SWB6wr	SWB6ws	SWB6wt	SWB6wu	SWB6wv	SWB6ww	SWB6wx	SWB6wy	SWB6wz	SWB6xa	SWB6xb	SWB6xc	SWB6xd	SWB6xe	SWB6xf	SWB6xg	SWB6xh	SWB6xi	SWB6xj	SWB6xk	SWB6xl	SWB6xm	SWB6xn	SWB6xo	SWB6xp	SWB6xq	SWB6xr	SWB6xs	SWB6xt	SWB6xu	SWB6xv	SWB6xw	SWB6xx	SWB6xy	SWB6xz	SWB6ya	SWB6yb	SWB6yc	SWB6yd	SWB6ye	SWB6yf	SWB6yg	SWB6yh	SWB6yi	SWB6yj	SWB6yk	SWB6yl	SWB6ym	SWB6yn	SWB6yo	SWB6yp	SWB6yq	SWB6yr	SWB6ys	SWB6yt	SWB6yu	SWB6yv	SWB6yw	SWB6yx	SWB6yy	SWB6yz	SWB6za	SWB6zb	SWB6zc	SWB6zd	SWB6ze	SWB6zf	SWB6zg	SWB6zh	SWB6zi	SWB6zj	SWB6zk	SWB6zl	SWB6zm	SWB6zn	SWB6zo	SWB6zp	SWB6zq	SWB6zr	SWB6zs	SWB6zt	SWB6zu	SWB6zv	SWB6zw	SWB6zx	SWB6zy	SWB6zz

R	30	25	27	23	22	1	2	7	4.4	19	16	11	42	36	37	40	6	49	24	25	29	26	23	26	4	21	14	48	12	9	10	4.3	7	3	4	R
C																																				C
MISC	RLC 2	RLC 2	RLC2 RLC1	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	V9 V8 V7 V6 V5 V4 V3	MISC		



**TRANSMITTER M.F. AP 100334
LAYOUT & SWITCH WIRING DIAGRAM.**

VIEW ON UNDERSIDE WITH RUNNERS REMOVED

VIEW OF PLUGS IN DIRECTION OF ARROW "C"