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Richard Hankins, VMARS Archivist, Summer 2004

RECEPTION SETS R106, MKS 1 AND 2

TECHNICAL HANDBOOK - TECHNICAL DESCRIPTION

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INTRODUCTION

1. The R106 is a special purpose high grade superheterodyne receiver for the reception of C.W., M.C.W. and R.T. (A.M.) signals. It has very high stability and resetting accuracy.
2. There are four models of the R106 Mk 1 and one model of the Mk 2. Though most of these incorporate variable selectivity, optional A.V.C., variable pitch C.W. oscillator and signal strength meter, one model does not include crystal selectivity or signal strength meter. The main differences are listed in para 29.

COMPLETE STATION

3. The complete station includes the following items:

- (a) Reception set, R106, Mk 1 or Mk 2
- (b) Coil units as follows:-

(i) 50-100kc/s	Type J	(vi) 1.7-4Mc/s	Type JD
(ii) 100-200kc/s	Type H	(vii) 3.5-7.3Mc/s	Type JC
(iii) 180-430kc/s	Type G	(viii) 7-14Mc/s	Type JB
(iv) 480-960kc/s	Type F	(ix) 14-30Mc/s	Type JA
(v) 900-2050kc/s	Type E		
- (c) Supply unit, rectifier, No. 5
- (d) Supply unit, vibratory, No. 2
- (e) Receiver, headgear, double, C.H.R.
- (f) Batteries, secondary, portable, 6V, 85Ah.
- (g) Lamps, operator, No. 3
- (h) Connectors, twin, No. 24A.
- (j) Cases, spare valves, No. 4A

BRIEF ELECTRICAL DESCRIPTION

4. Fig 1 shows a block diagram of the receiver. The frequency range is covered in nine bands by separate plug-in coil units. When the crystal filter is not in use the I.F. bandwidth is 3.0kc/s at -6db. With the crystal in circuit the maximum selectivity is 200c/s at -6db.
5. Audio output may be fed to either headphones or a loudspeaker at will. The headphone impedance is 2000 Ω and the loudspeaker impedance is 7000 Ω . When the loudspeaker is disconnected from the set the output terminals at the rear of the chassis must be short-circuited.
6. The aerial input circuits are designed for coupling to a balanced or unbalanced transmission line of approximately 500 Ω impedance, but may be fed from a single wire aerial.
7. The receiver sensitivity over all bands is of the order of 2.0-3.0 microvolts for 1 watt output to a loudspeaker, with 30% modulation.
8. The receiver operates from either a 100 - 250V 50c/s A.C. supply using the Supply unit, rectifier, No. 5 (see Tels K 220/5) or from a 6V D.C. battery supply using the Supply unit, vibratory, No. 2. The power supplies required are H.T., 250V D.C. at 60mA, and L.T. 6.3V A.C. or D.C. at 3.5A.

9. Terminals are provided at the rear of the chassis for relay control of the receiver when required. These terminals must be short-circuited when not in use.

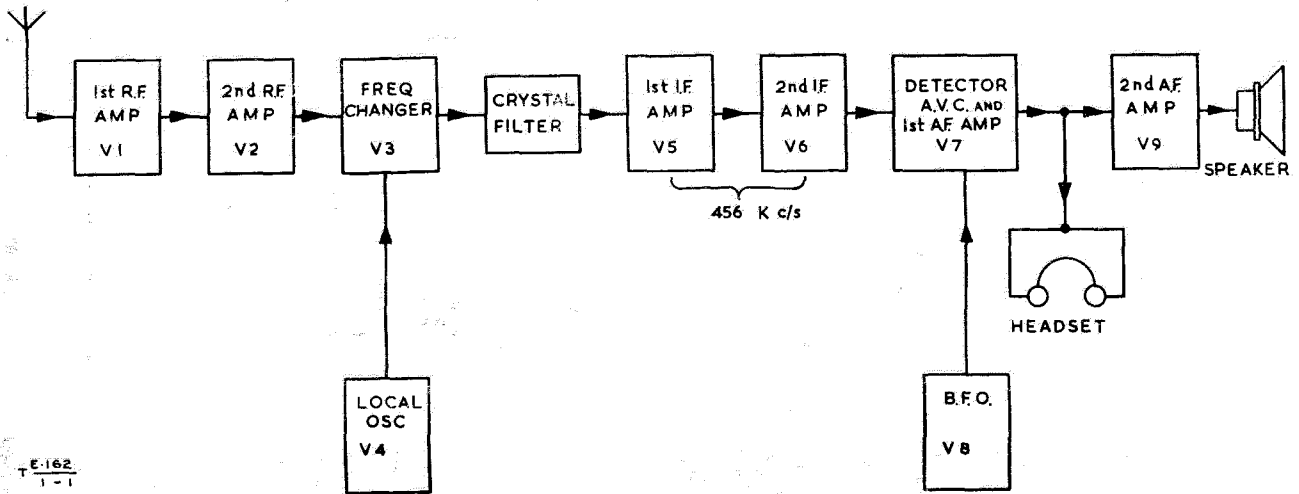


Fig 1 - Block diagram

10. The circuit differences between the Mk 1 and Mk 2 receivers are given in para 29. The changes in components are noted in Table 1001.

BRIEF MECHANICAL DESCRIPTION

11. The receiver normally is provided for table operation and is housed in a steel cabinet with hinged lid. All models can be provided for rack-mounting in which case only the chassis with a stronger front panel is supplied.

12. The physical dimensions of the receiver in its case, complete with one coil unit, are as follows:-

Weight	32lbs	Width	17½ inches
Height	9 inches	Depth	12 inches

The dimensions of individual coil units are as follows:-

Weight	2lbs	Width	10½ inches
Height	2½ inches	Depth	5½ inches

13. The receiver is assembled on a steel chassis to which is attached a steel front panel. The coil units, (see Fig 2), comprise four separately screened cans which house the aerial, R.F., frequency-changer and oscillator coils together with their associated capacitors. All four sections are mounted on a panel, to which is attached a calibration chart, showing the relationship between dial reading and the frequency coverage of the unit. A table is also attached for the recording of station dial settings.

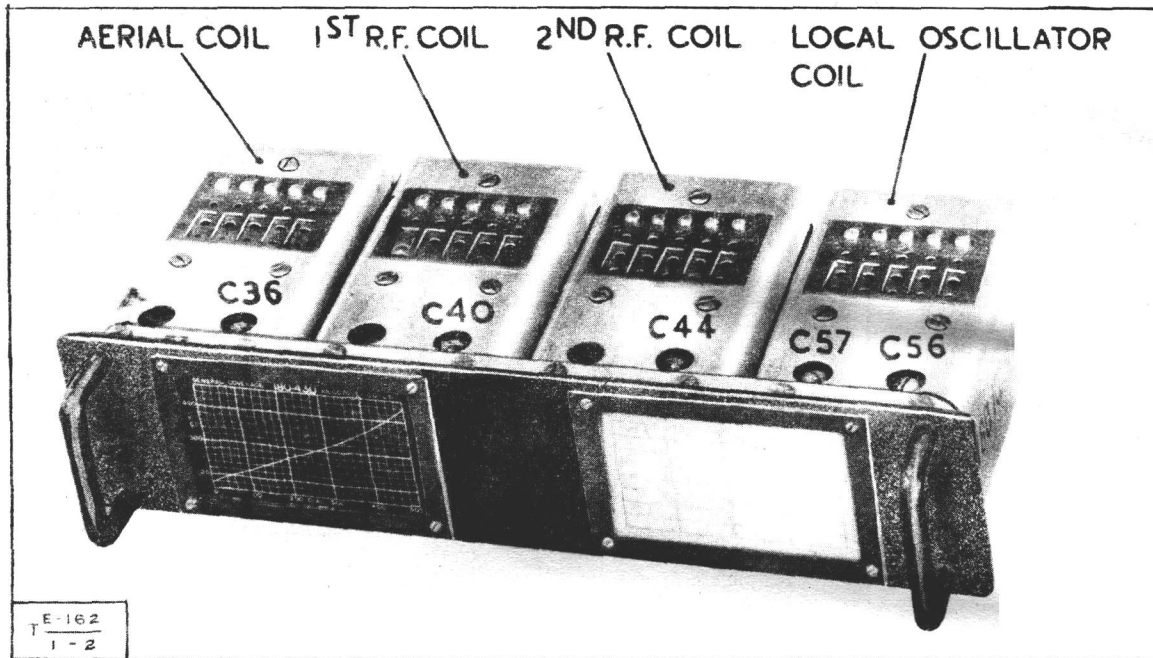


Fig 2 - Typical coil unit

14. The main tuning dial and drive mechanism is designed to provide the highest degree of re-setting and reading accuracy. An effective scale length of over 12 feet is obtained by the use of a 20 to 1 reduction gear. The dial is in two parts, an outer dial engraved with 50 divisions and having 5 equally spaced apertures and an inner dial geared to the outer but rotating on a separate eccentric bearing. The action is such that the numerals appearing through the aperture adjacent to the index indicate the number of divisions that have passed the index. In this way 500 divisions correspond to 10 revolutions of the dial for an angular movement of the driven spindle of 180° . Interpolation to one fifth of a division is easy and the dial may thus be read to one part in 2500. The split, spring-loaded, worm wheel reduction gearing is housed in a substantial die-cast casing. The tuning gang is of very rigid construction, each section being isolated from the case and having its own rotor earth contact.

CONTROLS
(see Fig 3)

15. With the exception of pre-set components all controls are mounted on the front panel, together with the S-meter, headphone output jack and pilot lamp. The designation, circuit reference and function of each control are given in Table 1. The aerial terminals are placed at the left-hand side of the chassis and are accessible through an opening in the side of the receiver case. The power leads are terminated in a four-pin plug, for use with either of the supply units mentioned in para 3.

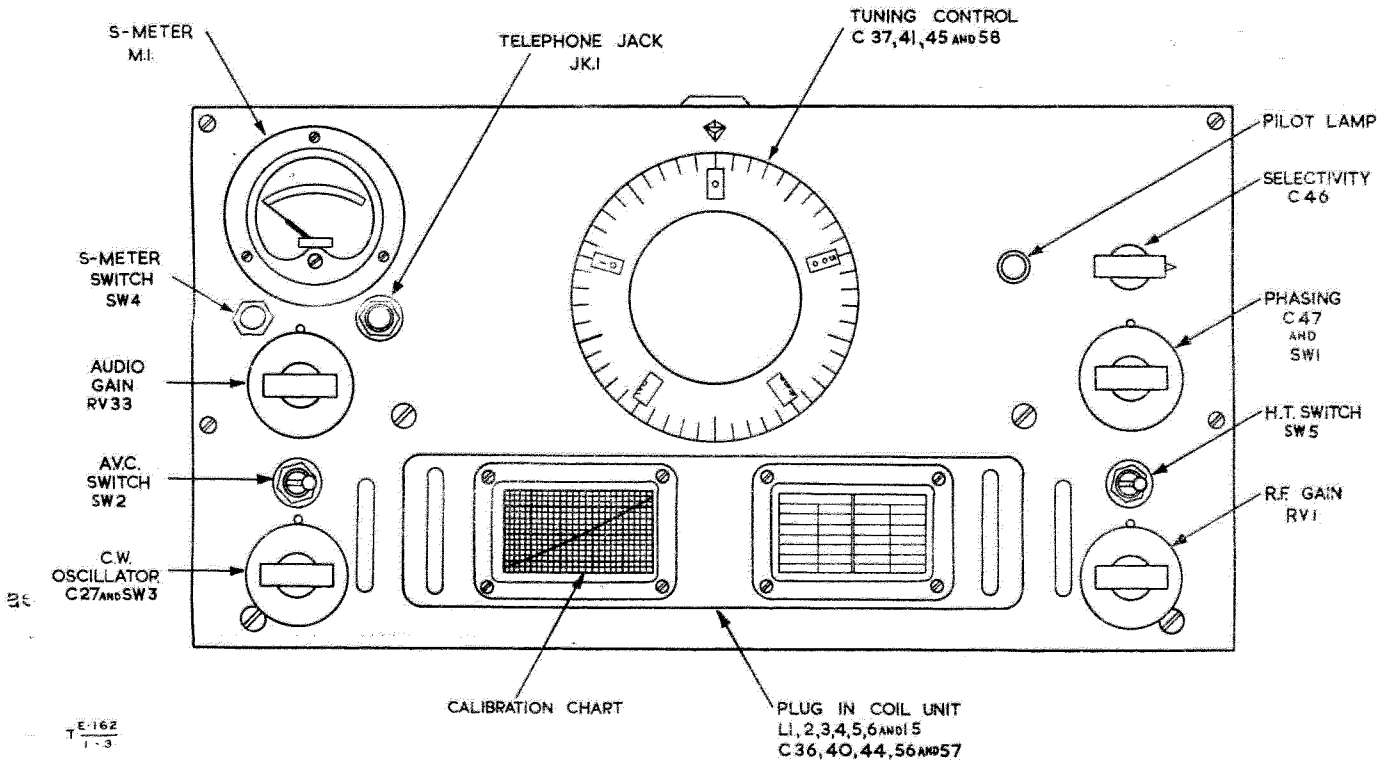


Fig 3 - Front panel controls

Table 1 - Front panel controls

Designation	Circuit reference	Function
Tuning control	C37; C41; C45; C58	Main tuning control. Clockwise rotation increases dial reading and frequency
H.T. switch	SW5	H.T. on/off toggle switch operating from left to right
Plug-in coil	L1 - L6 and L15 C36; C40; C44; C56; C57	R.F. and local oscillator tuned circuits
R.F. GAIN	RV1	Varies the gain of the 2nd R.F. and two I.F. stages, V2, V5 and V6

Table 1 - (contd)

Designation	Circuit reference	Function
AUDIO GAIN	RV33	A.F. volume control
Selectivity control	CL6	Controls selectivity of I.F. stages when the crystal filter is in circuit. When crystal filter is not in use this control acts as a normal I.F. trimming capacitor
PHASING control and crystal filter switch	CL7 SW1	Rotation from zero opens switch SW1 and brings crystal into operation. This control is then used for eliminating interfering signals
C.W. OSC. control and switch	CR7 SW3	Clockwise rotation from zero closes switch in H.T. line to B.F.O., V8. This control varies the pitch of the beat note
A.V.C. switch	SW2	A change-over switch. Disconnects the grids of the R.F. and I.F. valves, V1, V2, V5 and V6 from the signal diode (Switch to left for A.V.C. ON)
S-meter switch	SW4	Normal on/off switch. Connects S-meter in circuit when required

TECHNICAL DESCRIPTION

General

16. The circuit diagram of the R106 Mk 1 is shown in Fig 1001. The aerial, R.F. and oscillator coil circuits shown are for the J type coil unit covering from 50-100kc/s. Fig 1002 shows the respective circuits for all the coil units. The circuit of the R106 Mk 2 is similar to the Mk 1 except as noted in Table 1001 and Fig 1001. Top and bottom views of the chassis are shown in Figs 4 and 5.

Aerial and R.F. stages

17. V1 and V2 are conventional R.F. amplifiers. The aerial is transformer coupled to the grid of V1 on all ranges by L1 and L2. V1 and V2 are transformer coupled by L3 and L4. A.V.C. bias is fed to the two stages via R28 and R31 respectively.

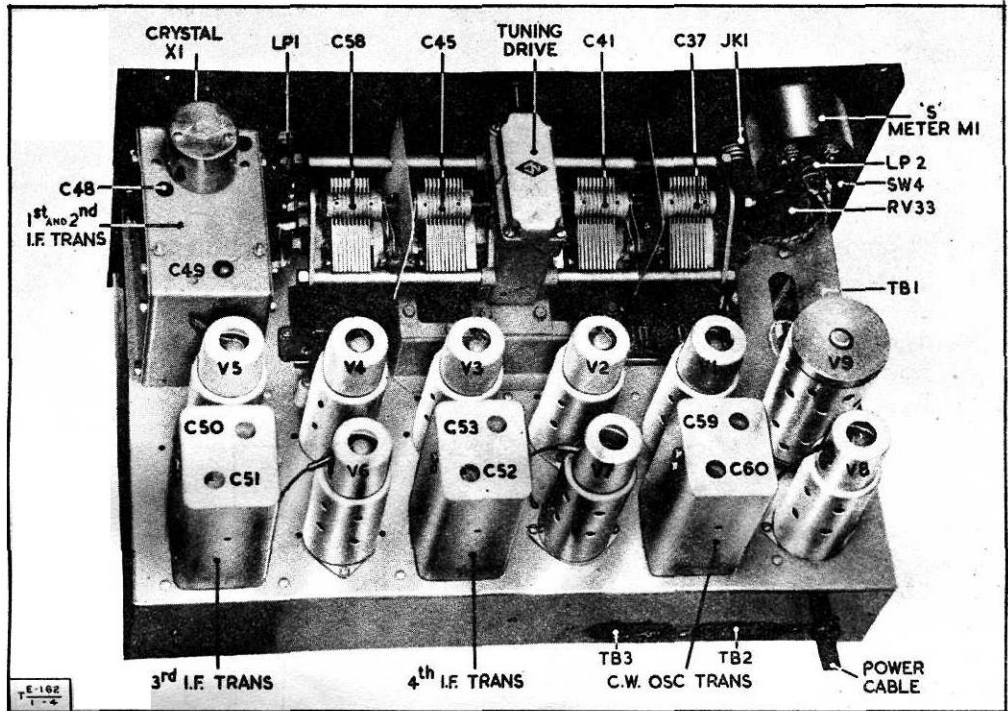


Fig 4 - Chassis, top view

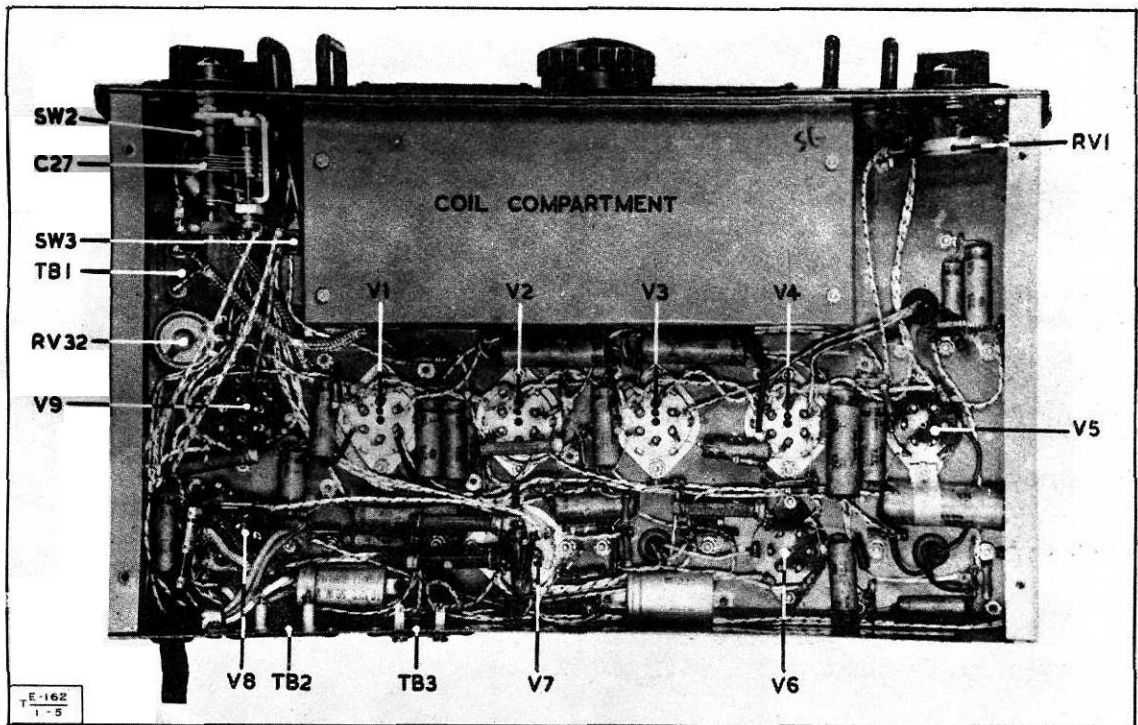


Fig 5 -- Chassis, bottom view

Gain compensation

18. The R.F. stages are designed to ensure uniform gain throughout the tuning range. High inductance primary coils are used in the interstage R.F. transformers. The coils are designed so that the primary circuit, as a whole, resonates broadly at a frequency outside the low frequency limit of the coil unit. The primary circuit therefore shows increasing impedance as the tuning of the receiver approaches the low frequency end of the band, thus compensating for the decreasing impedance of the secondary.

19. In the 14-30Mc/s band a different arrangement has been employed. The inter-stage R.F. transformer has three windings (see Fig 6). The primary winding is closely coupled to the tuned secondary, being interwound with it and having the same number of turns. A grid winding which consists of a large number of turns of fine wire is also closely coupled to the secondary. This grid winding is resonant outside the low frequency end of the band and compensates for variations in the impedance of the tuned circuit. Gain compensation is not employed on the 50-100kc/s band.

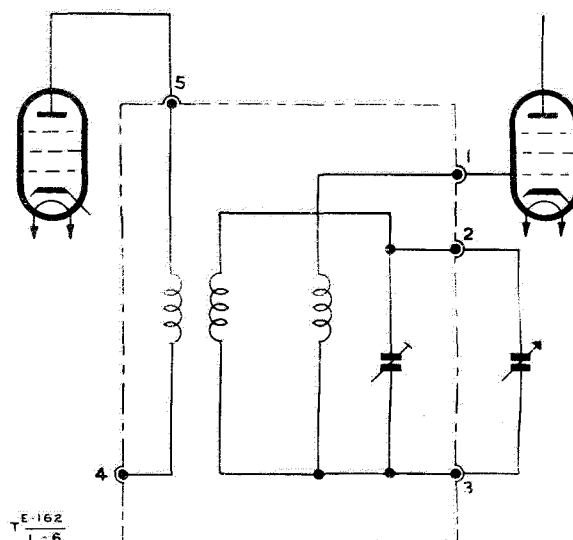


Fig 6 - Gain compensation,
14-30Mc/s band

Frequency-changer and local oscillator

20. V2 is coupled to the frequency changer, V3, by the R.F. transformer L5 and L6. A separate local oscillator employing a Hartley circuit is used. The output from the local oscillator, V4, is fed from the cathode via C7 to the screen of V3. The frequency-changer operates with fixed cathode bias and A.V.C. is not applied.

Frequency drift

21. Frequency drift is minimised by employing high stability components in the tuned circuits and by minimising the effects of any temperature change. Drift due to gradual changes in room temperature is reduced by the use of air dielectric trimmers and tuning capacitors and coil formers having a low temperature coefficient of expansion. The R.F. coil unit is plugged into the set under the chassis to minimise heating from the valves. The temperature in the receiver is also kept down by using a separate power supply unit and a well ventilated cabinet.

Crystal filter

22. The crystal filter circuit is conventional in design and operates at the nominal I.F. frequency of 456Kc/s. Two controls are provided together with a switch ganged to the phasing control for short-circuiting the crystal when it is not required. With

the crystal in circuit, the bandwidth in the broad position of the selectivity control, is approximately 2.5kc/s and in the sharp position approximately 200c/s, at 6db down. With the crystal in circuit the phasing control can be adjusted to suppress any one interfering signal differing from the desired signal by 300c/s or more. The bridge circuit component values are such that balance is obtained with the phasing control set at approximately the centre of its capacity range. When the crystal is short-circuited by turning the phasing control fully anti-clockwise to zero, the selectivity control acts as a normal I.F. trimmer and should be set for maximum sensitivity.

I.F. stages

23. The output from the crystal unit is matched to the first I.F. stage, V5, by the tapping on L9. The two I.F. stages, in addition to cathode biasing via R4 and R9 respectively, have A.V.C. applied to their grids through R3 and R8. The gain of the two I.F. stages together with the second R.F. stage is manually controlled by the R.F. gain-control, RV1.

Detector and A.V.C.

24. The detector and A.V.C. circuits employ the first diode of V7. A.V.C. is fed via R19 to the filter circuits of the controlled valves when the A.V.C. switch is ON. When the A.V.C. is switched OFF, the mean grid bias of the controlled valves is maintained by the second diode, at approximately the same potential as that existing under no signal conditions with A.V.C. ON. The by-pass capacitor, C15, in the second diode circuit, removes any stray signal pickup or feedback which could produce partial A.V.C. with the switch in the OFF position.

A.F. stages

25. The audio amplifier section of V7 is a pentode in the Mk 1 receiver and a triode in the Mk 2 receiver. The anode load R18 and V9 cathode resistor, R25, differ in the two receivers due to different valve characteristics. R16 and R17 are omitted in the Mk 2.

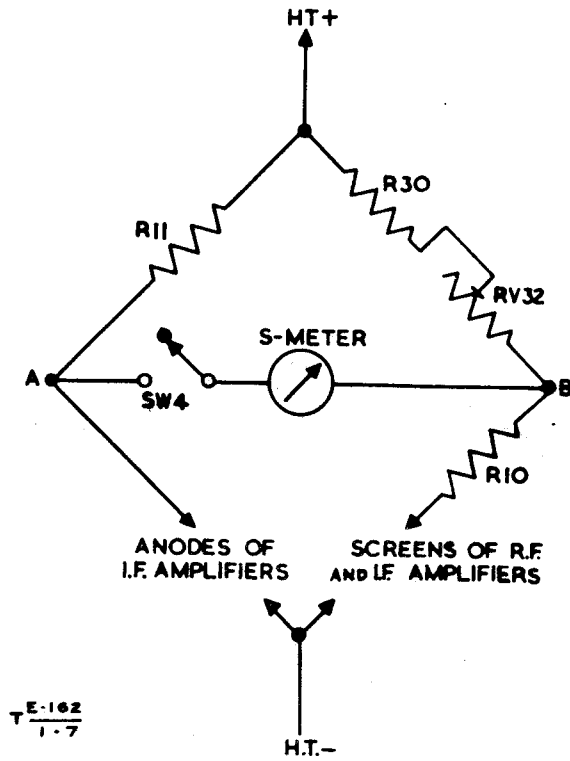
26. The A.F. output from V7 is resistance-capacitance coupled to the grid of V9 for loudspeaker operation. When the headphone plug is inserted in JK1, C18 is disconnected from the grid of V9, which is then earthed through the jack, JK1.

C.W. oscillator

27. The C.W. oscillator is provided with a variable pitch control on the front panel. This control also operates the switch SW3, in the H.T. line to the valve. Capacitor C20 prevents feedback via the heater circuit.

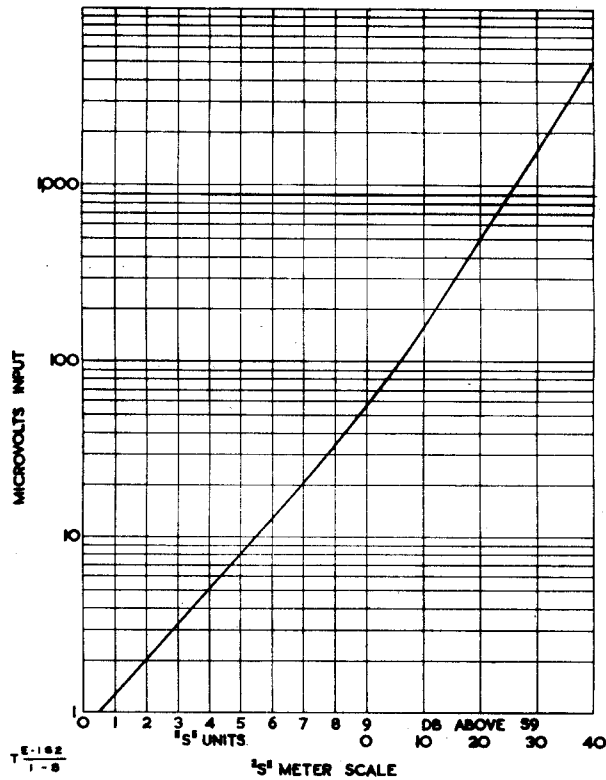
S-meter

28. The S-meter operates in a bridge circuit (see Fig 7). It is calibrated in S-units and db above S9. The bridge circuit is initially balanced by R32, so that the meter deflection is zero under no signal conditions with the R.F. gain control set to 9.5. Fig 8 shows the relation between meter readings and the actual signal input to the receiver in microvolts. It will be seen from Fig 8 that each S-unit is equal to a change of approximately 4db. The 40db range above S9 level is used for comparative checks on extremely strong signals.



T E-162
1-7

Fig 7 - S-meter, circuit detail



T E-162
1-8

Fig 8 - S-meter, sensitivity curve

Differences between models

29. The foregoing description covers all models, the main differences being listed below:-

R106, Mk 1

- (a) H.R.O. Senior: This is the original model which is complete with amateur bandsread (see para 32), crystal filter and S-meter
- (b) H.R.O. Junior: This is similar to H.R.O. Senior but without the special facilities enumerated in (a) above
- (c) H.R.O.-M: This is similar to the H.R.O. Senior, less bandsread but is provided with a plug-in crystal gate
- (d) H.R.O.-MK: Similar to H.R.O.-M but with built-in crystal gate.

R106, Mk 2

- (a) H.R.O.-5: This is similar to H.R.O.-Mx but uses metal valves instead of glass. (see para 25 and Table 1001 for component changes).

POWER SUPPLY UNITS

(see Figs 1003 and 1004)

30. The Supply unit rectifier, No. 5 (Fig 1003) consists of a standard full-wave rectifier circuit using an indirectly heated rectifier, V1 (CV 1863). The smoothing circuit uses a capacitor input filter C3, L1, followed by a further stage consisting of C4A, C4B and L2. An R.F. choke, L3, is included in the output lead. The H.T. supply is fused in the negative return lead by FS1. (250mA). The primary circuit is tapped for mains supplies from 100-170W and 200-250V A.C. R.F. bypass capacitors C1 and C2 filter the primary circuit. The indicator lamp, LP1, is wired across the L.T. circuit.

31. The Supply unit, vibratory, No. 2 (Fig 1004) comprises a non-synchronous vibrator driven from a 6V battery through an R.F. input filter and spark suppression circuit. The indicator lamp, LP1, is wired into the input circuit. The chopped D.C. from the vibrator is stepped up by T2 and fed to the full-wave cold-cathode rectifier, V1 (CV 692). Comprehensive smoothing circuits are provided to remove all traces of interference from the vibrator circuits.

BANDSPREAD COILS

32. Some receivers of either Mk may be equipped with a set of coils giving a bandsread facility. Table 2 shows the frequency coverage of these coils. It will be noted that a portion of the range in each case is extended to cover almost the whole of the tuning dial scale. These coil-sets are aligned for a particular receiver and differ further in that the coil-set for a receiver with metal valves (Mk 2) will not operate with a receiver using glass valves (Mk 1) without realignment.

Table 2 - Bandsread coils

Coil-set	General coverage	Bandsread	Dial
A	14 - 30Mc/s	28 - 29.7Mc/s	50 - 450
B	7 - 14.4Mc/s	14 - 14.4Mc/s	50 - 450
C	3.5 - 7.3Mc/s	7 - 7.3Mc/s	50 - 450
D	1.7 - 4Mc/s	3.5 - 4Mc/s	50 - 450

Note: The next page is Page 1001

Table 1001 - Components

Circuit ref	Value	Tolerance and rating	Type	Location
RESISTORS				
RV1	10k Ω		1.1/2W Variable	C3
R2	5k Ω	$\pm 10\%$	1/2W	E4
R3	500k Ω	$\pm 10\%$	1/2W	G4
R4	300 Ω	$\pm 10\%$	1/2W	H4
R5	50k Ω	$\pm 10\%$	1/2W	D3
R6	100k Ω	$\pm 10\%$	1/2W	E2
R7	100k Ω	$\pm 10\%$	1/2W	D1
R8	500k Ω	$\pm 10\%$	1/2W	J4
R9	2.2k Ω	$\pm 10\%$	1/2W	J4
R10	15k Ω	$\pm 10\%$	1W	K6
R11	2500 Ω	$\pm 10\%$	1/2W	L6
R12	500k Ω	$\pm 10\%$	1/2W	L4
R13	50k Ω	$\pm 10\%$	1/2W	K5
R14	250k Ω	$\pm 10\%$	1/2W	M4
R15	30k Ω	$\pm 10\%$	1W	K6
R16 Mk 1	20k Ω	$\pm 10\%$	1/2W	L4
R16 Mk 2	Omitted			
R17 Mk 1	100k Ω	$\pm 10\%$	1W	L6
R17 Mk 2	Omitted			
R18	100k Ω	$\pm 10\%$	1W	L6
R18 Mk 2	50k Ω	$\pm 10\%$	1W	L6
R19	500k Ω	$\pm 10\%$	1/2W	K4
R20	800 Ω	$\pm 10\%$	1/2W	L4
R21	60 Ω	$\pm 10\%$	2W Wire-wound	O3
R22	100k Ω	$\pm 10\%$	1/2W	M3
R23	250k Ω	$\pm 10\%$	1/2W	M3
R24	100k Ω	$\pm 10\%$	1/2W	M2
R25 Mk 1	500 Ω	$\pm 10\%$	1W	N4
R25 Mk 2	300 Ω	$\pm 10\%$	1W	N4
R26	500k Ω	$\pm 10\%$	1/2W	N4
R27	300 Ω	$\pm 10\%$	1/2W	B4
R28	500k Ω	$\pm 10\%$	1/2W	B4
R29	300 Ω	$\pm 10\%$	1/2W	D4
R30	2k Ω	$\pm 10\%$	1/2W	L6
R31	500k Ω	$\pm 10\%$	1/2W	C4
RV32	1k Ω		1W Variable	K6
RV33	500k Ω	$\pm 20\%$	2W Variable	K4
R34	50k Ω	$\pm 10\%$	1/2W	L2
R35	20k Ω	$\pm 10\%$	1/2W	D2

Note: R9 varies with individual receivers between 1k Ω and 5k Ω

Table 1001 - (contd)

Circuit ref	Value	Tolerance and rating	Type	Location
CAPACITORS				
C1	0.1 μ F	+20% -10%	400V D.C. wkg	H4
C2	0.01 μ F	+20% -10%	600V D.C. wkg	H4
C3	0.1 μ F	+20% -10%	400V D.C. wkg	F4
C4	0.1 μ F	+20% -10%	600V D.C. wkg	C6
C5	0.1 μ F	+20% -10%	600V D.C. wkg	E1
C6	0.1 μ F	+20% -10%	400V D.C. wkg	H4
C7	0.01 μ F	+20% -10%	600V D.C. wkg	E2
C8	0.25 μ F	+20% -10%	600V D.C. wkg	J4
C9	0.01 μ F	+20% -10%	600V D.C. wkg	J4
C10	0.1 μ F	+20% -10%	400V D.C. wkg	J4
C11	10 μ F	+15% - 0%	50V D.C. wkg	M4
C12	100pF	+5%	500V D.C. wkg	L4
C13	250pF	+10%	500V D.C. wkg	L5
C14	0.1 μ F	+20% -10%	400V D.C. wkg	K4
C15	0.01 μ F	+20% -10%	600V D.C. wkg	M4
C16	500pF	+10%	1000V D.C. wkg	M4
C17	0.1 μ F	+20% -10%	400V D.C. wkg	D4
C18	0.1 μ F	+20% -10%	600V D.C. wkg	N5
C19	10 μ F	+15% - 0%	50V D.C. wkg	O4
C20	0.1 μ F	+20% -10%	400V D.C. wkg	M1
C21	0.1 μ F	+20% -10%	400V D.C. wkg	M1
C22	0.1 μ F	+20% -10%	400V D.C. wkg	B4
C23	0.1 μ F	+20% -10%	400V D.C. wkg	B6
C24	0.01 μ F	+20% -10%	600V D.C. wkg	B4
C25	0.1 μ F	+20% -10%	600V D.C. wkg	C6
C26	0.01 μ F	+20% -10%	600V D.C. wkg	C4

Table 1001 - (contd)

Circuit ref	Value	Tolerance and rating	Type	Location
C27	5-35pF		Variable	M1
C28	0.01 μ F	+20% 600V D.C. wkg -10%		N4
C29	0.001 μ F	+10% 500V D.C. wkg		L2
C30	100pF	+5% 500V D.C. wkg		D2
C31	100pF	+5% 500V D.C. wkg		F5
C32	100pF	+5% 500V D.C. wkg		E5
C33	2pF	+50% 400V D.C. wkg		M3
C36	see Table 1002			A5
C37	12-225pF		Variable gang	B4
C40	see Table 1002			C5
C41	12-225pF		Variable gang	C4
C44	see Table 1002			E5
C45	12-225pF		Variable gang	E4
C46	100pF		Variable	C5
C47	10pF		Variable	C5
C48	3-30pF		Trimmer	C5
C49	6-85pF		Trimmer	H5
C50	6-85pF		Trimmer	H5
C51	6-85pF		Trimmer	J5
C52	6-85pF		Trimmer	K5
C53	6-85pF		Trimmer	K5
C56	see Table 1002			C2
C57	see Table 1002			C2
C58	12-225pF		Variable gang	C1
C59	6-85pF		Trimmer	L2
C60	6-85pF		Trimmer	L2
C61	50pF	+5% 500V D.C.		C2
C62	100pF	+5% 500V D.C.	1002 type	G4
C63	350pF	+10% 500V D.C.	1002 type	F4
C64	450pF	+10% 500V D.C.	1002 type	E4
C65	880pF	+10% 500V D.C.	1002 type	JD4
C66	1600pF	+10% 500V D.C.	1002 type	JC4
C67	2600pF	+10% 500V D.C.	1002 type	JB4
C68	40pF	+5% 500V D.C.	1002 type	JA1
C69	1200pF	+10% 500V D.C.	1002 type	JA1
C70	850pF	+10% 500V D.C.	1002 type	JA4

Table 1001 - (contd)

Circuit ref	Type Mk 1	Type Mk 2	Location
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VALVES

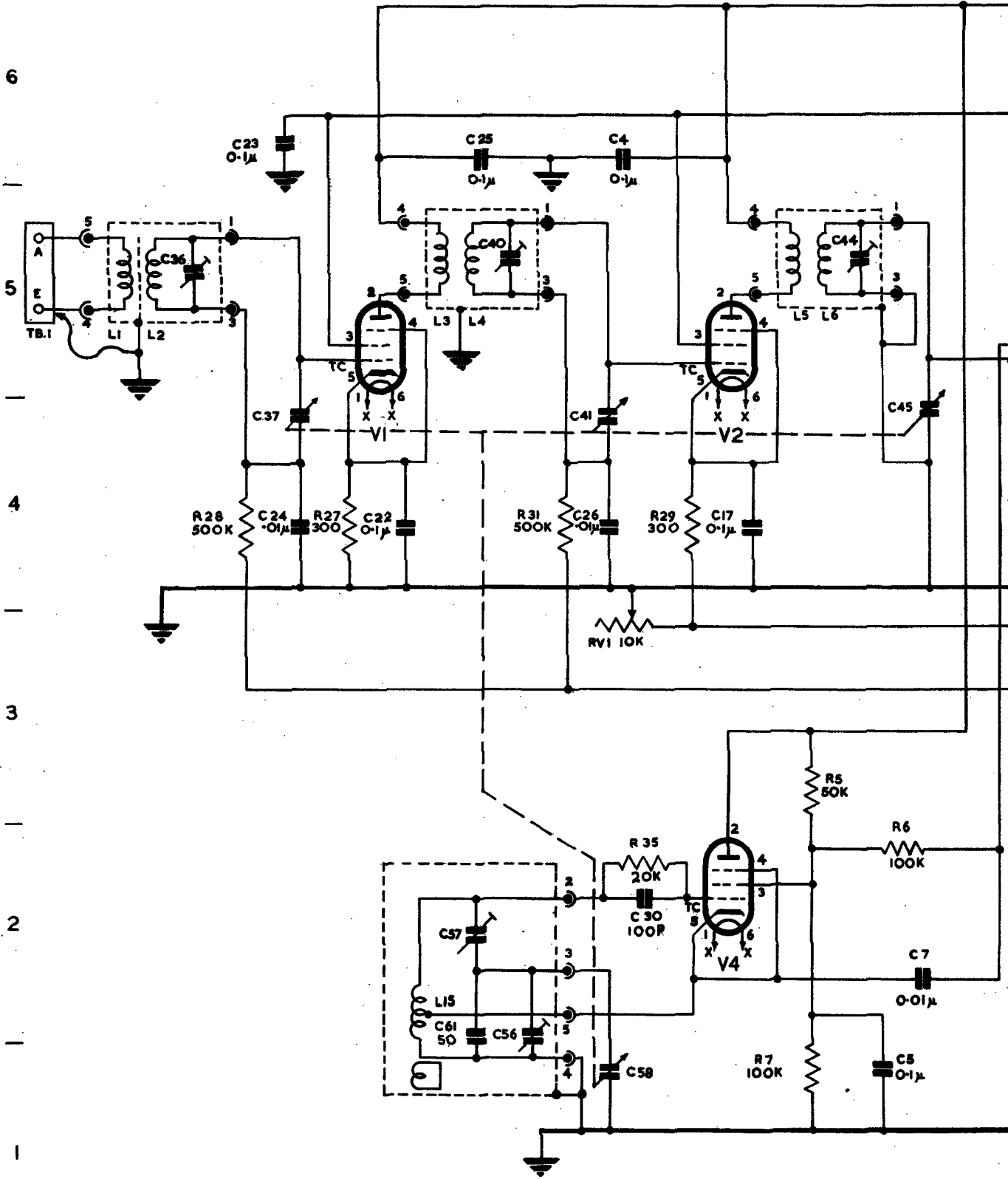
V1	CV1900 (6D6)	CV1942 (6K7)	B5
V2	CV1900 (6D6)	CV1942 (6K7)	D5
V3	CV585 (6C6)	CV1936 (6J7)	E5
V4	CV585 (6C6)	CV1936 (6J7)	D2
V5	CV1900 (6D6)	CV1942 (6K7)	H5
V6	CV1900 (6D6)	CV1942 (6K7)	J5
V7	CV1891 (6B7)	CV1990 (6SQ7)	L5
V8	CV585 (6C6)	CV1936 (6J7)	M2
V9	CV609 (42)	CV511 (6V6GT/G)	N5

SWITCHES

SW1	Crystal filter switch	G5
SW2	A.G.C. switch (toggle)	L3
SW3	C.W. oscillator H.T. switch (toggle)	M3
SW4	S-meter switch (push-pull)	L6
SW5	H.T. switch (toggle)	O6

Table 1002 - Trimmer and padder capacitors

Coil set	Frequency range	C36	C40	C44	C56	C57
JA	14 - 30Mc/s	5-28pF	5-28pF	5-28pF	5-28pF	-
JB	7 - 14.4Mc/s	5-28pF	5-28pF	5-28pF	6-38pF	-
JC	3.5 - 7.3Mc/s	5-28pF	5-28pF	5-28pF	5-28pF	-
JD	1.7 - 4Mc/s	5-28pF	5-28pF	5-28pF	5-28pF	-
E	900 - 2050kc/s	5-28pF	5-28pF	5-28pF	5-28pF	6-38pF
F	480 - 960kc/s	6-38pF	6-38pF	6-38pF	7-56pF	6-38pF
G	180 - 430kc/s	5-28pF	5-28pF	5-28pF	5-28pF	6-38pF
H	100 - 200kc/s	6-38pF	6-38pF	6-38pF	8.5-75pF	10-97pF
J	50 - 100kc/s	6.5-45pF	6.5-45pF	6.5-45pF	8.5-75pF	8.5-75pF



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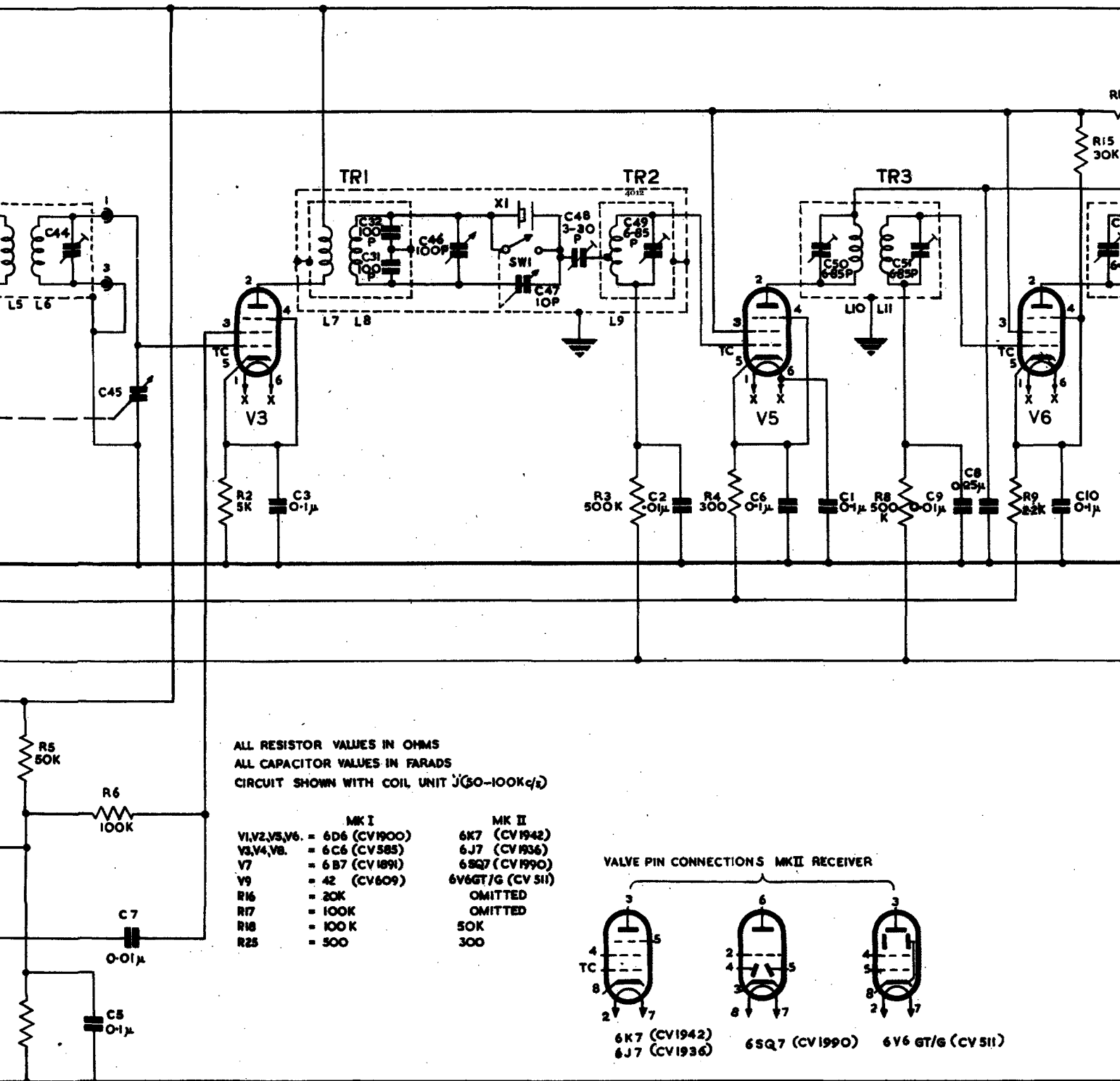
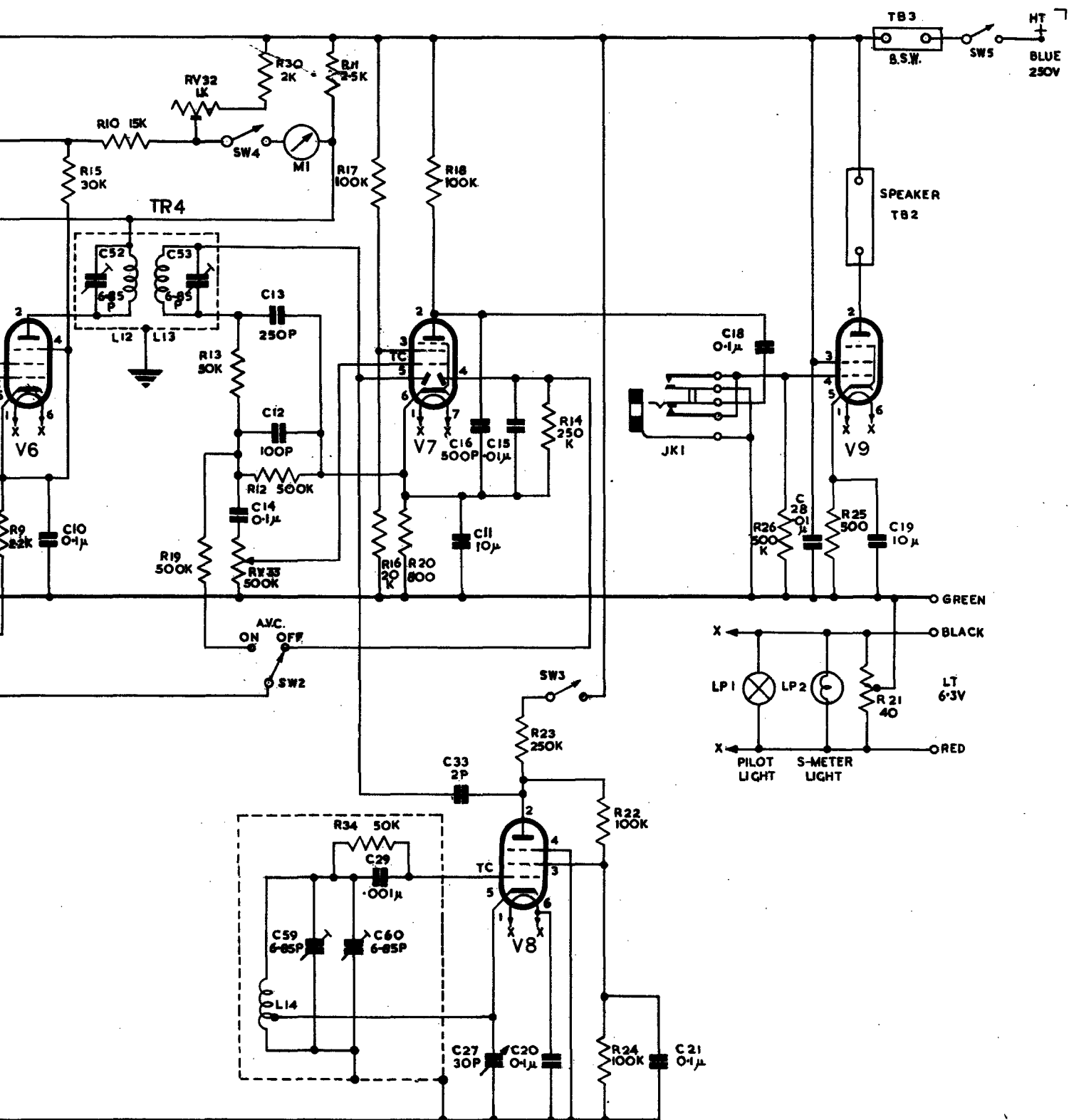


Fig. 1001 — Reception set R106, Mk I, circuit diagram

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**Fig. 1001 — Reception set R106, Mk1,
circuit diagram**



K I L I M I N I O

ELECTRICAL AND MECHANICAL
ENGINEERING REGULATIONS

COIL STAGE	FREQUENCY 50-100 Kc/s TYPE J	FREQUENCY 100-200 Kc/s TYPE H	FREQUENCY 180-430 Kc/s TYPE G	FREQUENCY 480-960 Kc/s TYPE F
AERIAL	AE. COIL 1 5 4 L1 C36 L2 1 2 3	AE. COIL 1 5 4 L1 C36 L2 1 2 3	AE. COIL 1 5 4 L1 C36 L2 1 2 3	AE. COIL 1 5 4 L1 C36 L2 1 2 3
FIRST R.F. TRANSFORMER	HF1 2 4 5 L3 C40 L4 1 2 3	HF1 2 4 5 L3 C40 L4 1 2 3	HF1 2 4 5 L3 C40 L4 1 2 3	HF1 2 4 5 L3 C40 L4 1 2 3
SECOND R.F. TRANSFORMER	HF2 3 4 5 L5 C44 L6 1 2 3	HF2 3 4 5 L5 C44 L6 1 2 3	HF2 3 4 5 L5 C44 L6 1 2 3	HF2 3 4 5 L5 C44 L6 1 2 3
LOCAL OSCILLATOR	OSC 4 L15 C57 C61 SOPF C56 02 03 05 04	OSC 4 L15 C57 C56 02 03 05 04	OSC 4 L15 C62 100P C57 C56 02 03 05 04	OSC 4 L15 C63 350P C57 C56 02 03 05 04

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FOR VALUES OF C36,4

Fig 1002 - Indivi

FREQUENCY 0-960 Kc/s TYPE F	FREQUENCY 0.9-2.05 Mc/s TYPE E	FREQUENCY 1.7-4.0 Mc/s TYPE JD	FREQUENCY 3.5-7.3 Mc/s TYPE JC	FREQUENCY 7.0-14.4 Mc/s TYPE JB	FREQUENCY 14.0-30.0 Mc/s TYPE JA
	<p>AE. COIL</p>	<p>AE. COIL</p>	<p>AE. COIL</p>	<p>AE. COIL</p>	<p>AE. COIL</p>
<p>2</p>	<p>HF1</p> <p>2</p>	<p>HF1</p> <p>2</p>	<p>HF1</p> <p>2</p>	<p>HF1</p> <p>2</p>	<p>HF1</p> <p>2</p>
<p>3</p>	<p>HF2</p> <p>3</p>	<p>HF2</p> <p>3</p>	<p>HF2</p> <p>3</p>	<p>HF2</p> <p>3</p>	<p>HF2</p> <p>3</p>
<p>4</p>	<p>OSC</p> <p>4</p>	<p>OSC</p> <p>4</p>	<p>OSC</p> <p>4</p>	<p>OSC</p> <p>4</p>	<p>OSC</p> <p>4</p>

VALUES OF C36,40,44,56 AND 57, SEE TABLE 1002

2 - Individual coil units

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Fig 1002 - Individual coil units

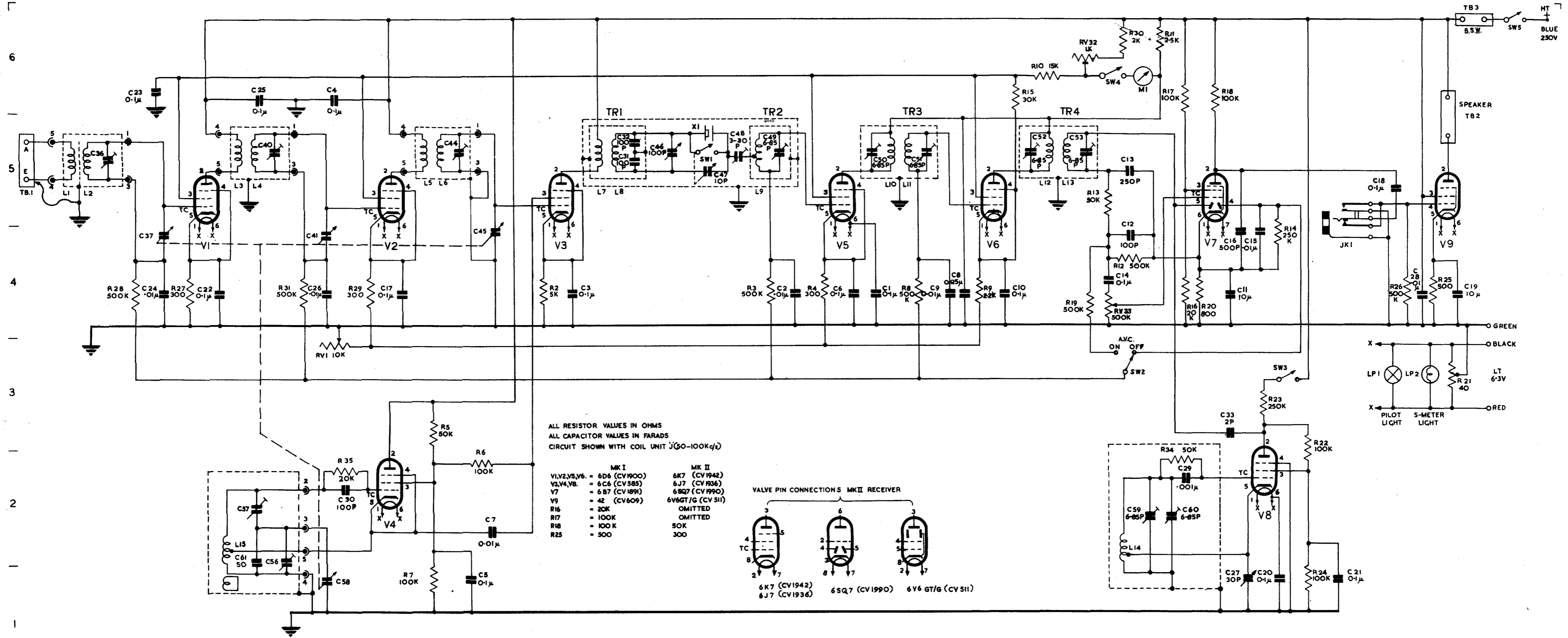


Fig. 1001—Reception set R106, Mk I, circuit diagram

COIL STAGE	FREQUENCY 50-100 Kc/s TYPE J	FREQUENCY 100-200 Kc/s TYPE H	FREQUENCY 180-430 Kc/s TYPE G	FREQUENCY 480-960 Kc/s TYPE F	FREQUENCY 0.9-2.05 Mc/s TYPE E	FREQUENCY 1.7-4.0 Mc/s TYPE JD	FREQUENCY 3.5-7.3 Mc/s TYPE JC	FREQUENCY 7.0-14.4 Mc/s TYPE JB	FREQUENCY 14.0-30.0 Mc/s TYPE JA
AERIAL	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1 	AE. COIL 1
FIRST R.F. TRANSFORMER	HF1 2 	HF1 2 	HF1 2 	HF1 2 	HF1 2 	HF1 2 	HF1 2 	HF1 2 	HF1 2
SECOND R.F. TRANSFORMER	HF2 3 	HF2 3 	HF2 3 	HF2 3 	HF2 3 	HF2 3 	HF2 3 	HF2 3 	HF2 3
LOCAL OSCILLATOR	OSC 4 	OSC 4 	OSC 4 	OSC 4 	OSC 4 	OSC 4 	OSC 4 	OSC 4 	OSC 4

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FOR VALUES OF C36,40,44,56 AND 57, SEE TABLE 1002

Fig 1002 - Individual coil units