Z1/ZA. 30006

RECEIVERS, BROADCAST, NEW ZEALAND
TYPE B, NO. 1.

WORKING INSTRUCTIONS AND SERVICE BULLETIN

RECEPTION SET, A.E.W.1, (N.Z.)

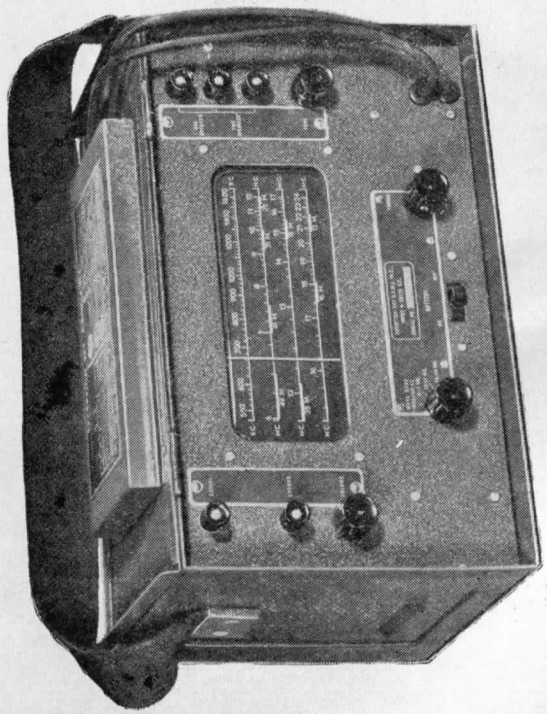


PLATE I.

RECEPTION SET, A.E.W.1 (N.Z.)

TECHNICAL DETAILS

CONTENTS

RECEPTION SET, A.E.W.1 (N.Z.)

1. General Description.

1.1 The AEW1 Receiver is designed for entertainment and educational purposes.

1.2 Basic features are, high sensitivity and ease of installation and operation, making it suitable for use by semi-skilled or unskilled personnel.

2.—Valve Complement.

Schematic Reference	Commercial Type	Purpose
V1A	6U7G	R.F. Amplifier
V2A	6K8GT	Mixer
V1B	6U7G	I.F. Amplifier
V3A	6Q7GT	2nd Detector, 1st Audio
V4A	6V6GT	2nd Audio (Output)

3. Technical Summary.

3.1 Electrical Characteristics.
The AEW1 Receiver is a supehetrodyne with self contained vibrator operated H.T. power supply.

3.2 Frequency Ranges.

Band	Frequency
B.C.	550 to 1600 Kilocycles
SW1	6 to 12 Megacycles
SW2	12 to 17 Megacycles
SW3	16 to 24 Megacycles

I.F. Frequency 455 kilocycles.

3.3 Power Supply Requirements.
The receiver is operated by 6 volt D.C. from an accumulator, the current consumption being 5 amps.

3.4 Output Impedances.
500 ohms for one Loudspeaker.
250 ohms for two Loudspeakers connected in parallel.

3.5 Power Output.
2.5 watts measured in a non inductive load.

3.6 Loudspeaker.
The Loudspeaker is a 500 ohm impedance Permanent Magnet Dynamic type, and is fitted with a 50 ft. lead.

4. Mechanical Specifications.

Dimensions	Receiver	Loudspeaker
Length	$14\frac{1}{4}$"	$11\frac{1}{4}$"
Depth	10"	8"
Height	$8\frac{3}{4}$"	13"
Weight (lbs.)	$34\frac{1}{2}$	$9\frac{3}{4}$

5. Aerial—Ground Requirements.

5.1 An aerial consisting of 100 ft. of insulated wire and two insulators is supplied with each receiver. The aerial should be erected as shown in figure 1.

5.2 25 ft. of Insulated (rubber covered) wire and a ground spike are supplied with each receiver for use as a ground connection. The receiver should be connected to the ground spike in accordance with figure 1.
With battery operated equipment a good ground connection is necessary for best results.

5.3 While aerial equipment is supplied with each receiver this does not preclude the possibility of the receiver being used with any other type of aerial, preferably having a minimum length of 50 ft. overall.

6. Installation.

6.1 Two AEW1 Receivers, Loudspeakers, and sets of aerial-ground accessories are shipped per case.

6.2 The Batteries, 6 volt Accumulators 85 A.H., are shipped in a charged condition, but without electrolyte.

6.3 The receivers are shipped with the valves installed.

6.4 Erect aerial-ground system as shown in figure 1, making sure that the connections to the receiver terminals and to the ground spike are tight.

6.5 Connect Loudspeaker or Loudspeakers to appropriate terminals on the receiver.

6.6 Fill the Batteries until the plates are just covered with sulphuric acid diluted with distilled water until the specific gravity is 1.33. Full charging details are given on each battery box lid.

6.7 Connect the receiver to a Battery (6 volts) making sure that the positive lead (red) is connected to the battery positive (+) (red) and that the other lead is connected to the battery negative (—) (black).

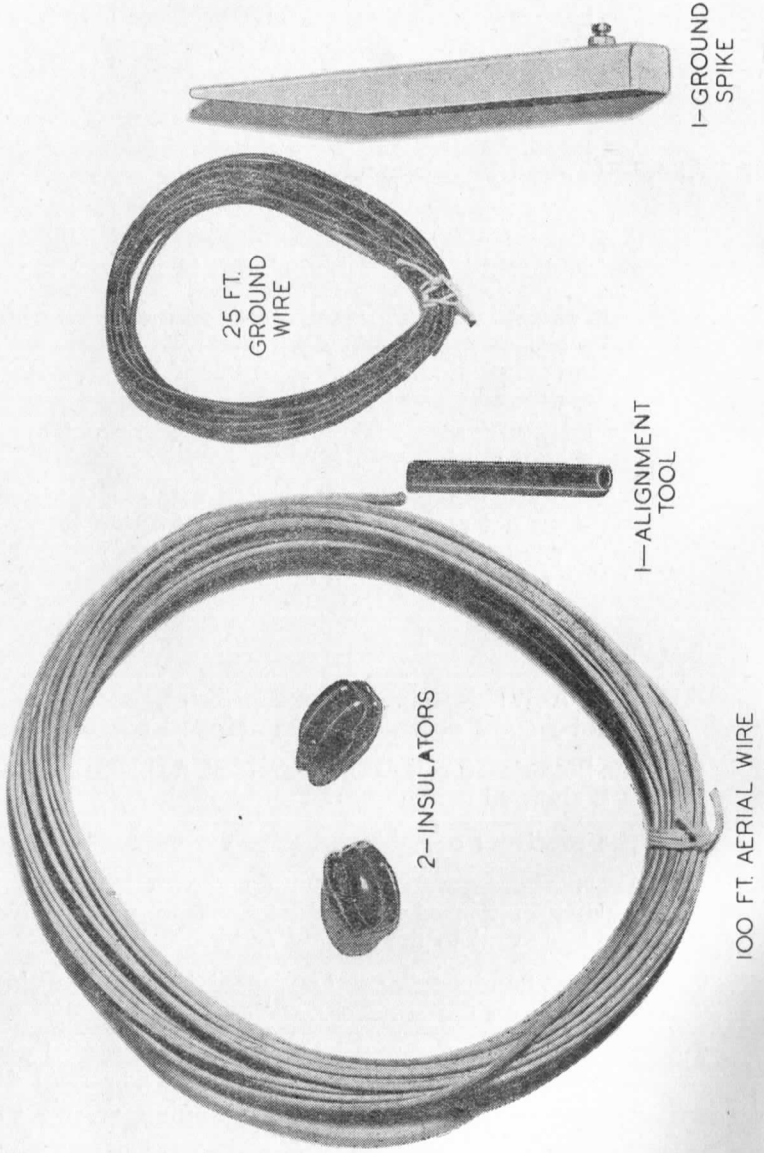


PLATE II.

7. Circuit Description.

7.1 The schematic diagram of AEW1 is shown in figure 2, on page 25.

7.2 The aerial terminal of the receiver is connected to the appropriate aerial coil primary winding, depending on the wave range selected, by switch S1A, and the appropriate seconday of the aerial coil is connected to the control grid of V1A by switch section S2A/2. Switch section S2A/1 short circuits the unused secondaries and the secondary in use is tuned by condenser C1A. By means of contacts on section S2A/2 condenser C2A in parallel with condenser C3A, is connected in series with the tuning condenser C1A when wave band SW1 is being used. Condenser C2A only is connected in series with C1A when wave band SW2 or SW3 is being used.

The trimmer condensers for the B.C., SW1, SW2, SW3 coils are C4D, C4C, C4B, and C4A respectively.

The tuned circuit radio frequency return is provided by condenser C5A.

7.3 V1A is a screen grid R.F. Amplifier. The anode of V1A is connected to the appropriate primary, depending on the wave band being used, by switch section S1B. The appropriate secondary is selected by means of switch S2B/2, and is tuned by condenser C1B. The unused secondaries are short circuited by switch section S2B/1. When wave band SW1 is being used condenser C2B in parallel with condenser C3B is connected in series with the tuning condenser C1B. When SW2 or SW3 are being used condenser C2B only is connected in series with condenser C1B.

The trimmer condensers for the wave bands B.C., SW1, SW2 and SW3 are C4H, C4G, C4F, and C4E respectively. The return end of the secondaries is bypassed to R.F. by condenser C5B.

7.4 Valve V2A is a hexode-triode, mixer-oscillator. The triode portion of this valve is used as a high frequency oscillator, a tuned anode oscillator circuit being employed.

The triode anode is connected to the appropriate oscillator coil secondary by switch section S2C/2. When wave band SW1 is being used, condenser C2C in parallel with condenser C3C, is connected in series with the tuning condenser C1C.

When SW2 or SW3 are being used condenser C2C only is connected in series with C1C.

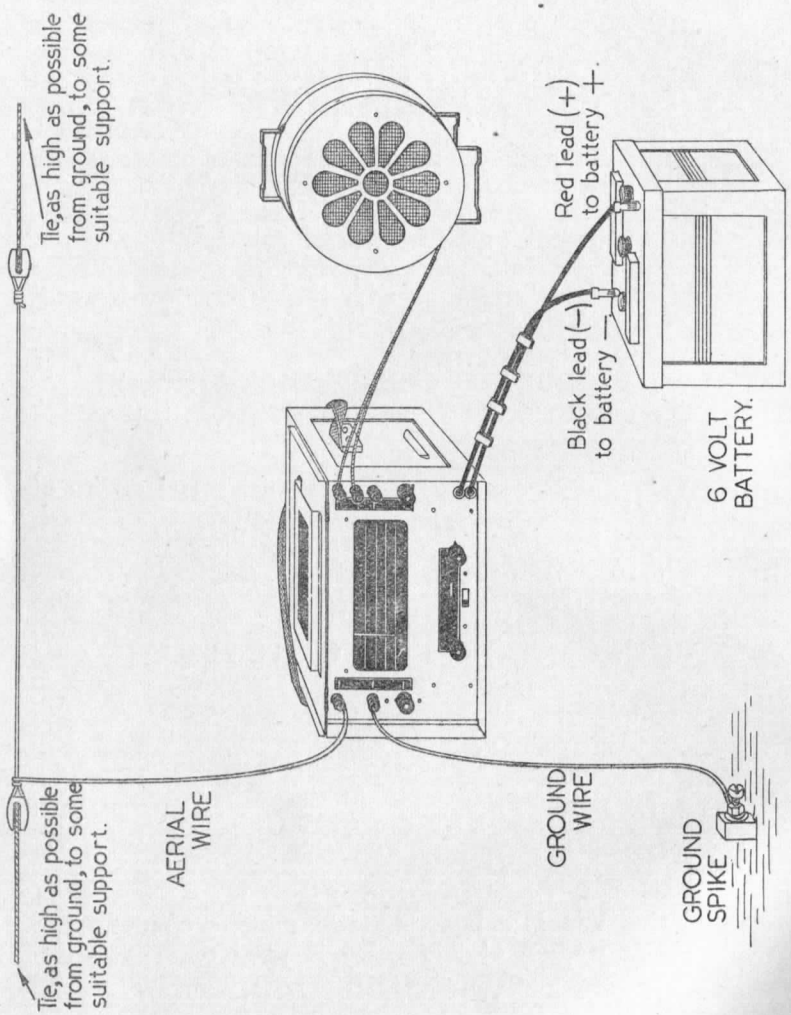


FIGURE I.

The trimmer condensers for the wave bands B.C., SW1, SW2 and SW3 are condensers C4L, C4K, C4J and C4I respectively, and the padding condensers are:—

B.C. Band	C13A in parallel with C12B
SWI Band	C11A in parallel with C12A
SW2 Band	C10A
SW3 Band	C9A

C8B and R5A are the anode coupling condenser and anode feed resistor respectively.
The triode grid is connected to the appropriate reaction winding by switch section S1C. Condenser C8A and resistor R3A are the grid condenser and leak respectively.

The anode of the hexode portion of the valve is connected to the primary of L13A which is tuned by condenser C16A. Screen grid potential is obtained from main H.T. through dropping resistor R6A, and the screen grid is bypassed to R.F. by condenser C7A. Valve V2A obtains its bias from the voltage drop developed across resistor R4A which is bypassed to R.F. by condenser C6B.

7.5 The secondary of the I.F. transformer L13A tuned by condenser C16B is connected to the control grid of the I.F. amplifier V1B.

The anode of V1B is connected to the primary of I.F. transformer L13B the primary being tuned by C16C. Screen grid potential for V1B is obtained through dropping resistor R6A from H.T. positive and the screen grid is bypassed to R.F. by condenser C7A. The cathode bias is obtained by the voltage drop across resistor R1B and the cathode is bypassed to R.F. by condenser C6C.

The signal from the secondary of L13B, tuned by condenser C16D is fed to one diode anode of V3A.

7.6 Valve V3A is a duode-diode triode, one diode portion of which is 2nd detector (demodulator), and the triode portion, the first audio amplifier. The other diode portion is used to supply AVC voltage to the control grids of V1A, V2A and V1B.

The R.F. signal is supplied to this latter diode through condenser C8D and the D.C. voltage developed across R8B is fed to the control grid of V1B and V2A by resistor R8A, and to valve V1A by resistor R8A in series with decoupling resistor R2A.

The audio voltage appearing across the diode load resistor R7A is filtered for R.F. by resistor R3B and condenser C8C and C17A, and is applied through isolating condenser C18A to the volume control potentiometer R11A. The centre arm of the volume control is connected by isolating condenser C18B to the control grid of the triode portion of V3A.
Grid bias for V3A is obtained by "contact potential" voltage developed across the high resistance R10A. The anode of V3A is bypassed to R.F. by condenser C8E and is connected by coupling condenser C18C to the control grid of valve V4A.
The anode of V3A obtains its H.T. potential through load resistor R2B from the main H.T. positive.

7.7 Valve V4A is a beam tetrode output valve. It obtains it's bias by the voltage drop across R12A which is bypassed to audio frequency by condenser C20A R7B is the grid leak.
The anode of V4A is connected to the primary of the output transformer T2. The secondary of this output transformer is tapped to provide 500 and 250 ohms output impedance. Screen potential for V4A is obtained directly from the H.T. positive. The anode is bypassed to R.F. by condenser C15D, while C6D and R9A comprise the tone control system.

7.8 Power supply:

6 volts from the battery is applied through swith S4A and radio frequency choke L14A to the centre tap of the primary of transformer T1. Condensers C14A, C14C and condensers C15A and C15C in conjunction with R.F. choke L14A comprise the R.F. filter. The primary circuit of transformer T1 is interrupted by contacts on the vibrator producing an A.C. voltage in the secondary of transformer T1. This secondary, however, is also interrupted by contacts on the vibrator, so that rectification takes place producing a D.C. potential between the centre tap of the secondary and chassis. The H.T. voltage is filtered for R.F. by choke L15A, condenser C7B and condenser C14D and the L.F. filtering is accomplished by reactor L16A and electrolytic condensers C19A and C19B. The H.T. output is also bypassed to R.F. by condenser C7B.

7.9 The vibrator which is of the 12 volt type, has been especially adjusted to operate on 6 volts and cannot be replaced with a 6 volt vibrator.

8. Operating Instructions.

8.1 Turn BATTERY SWITCH to "ON" position.

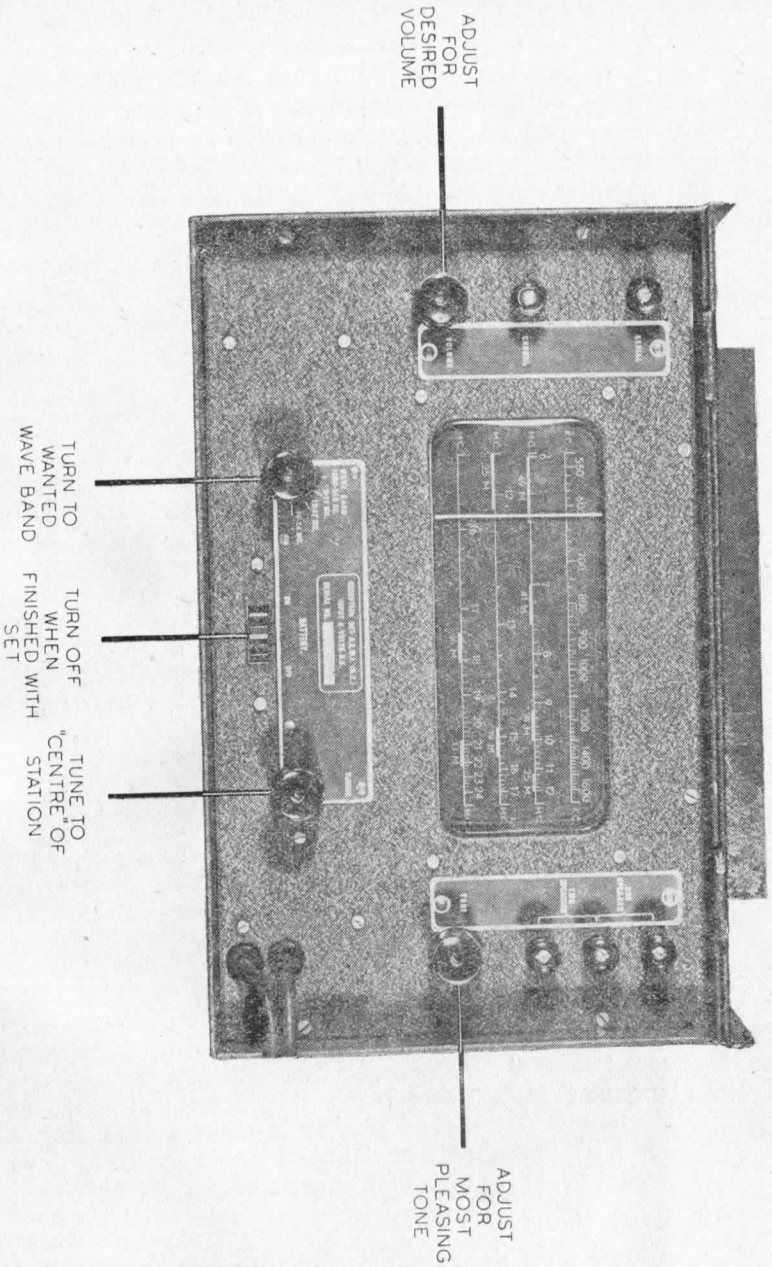


PLATE 111.

8.2 Set WAVE BAND SWITCH to band desired.

8.3 Set VOLUME CONTROL about half on.

8.4 Turn TUNING CONTROL until the dial pointer indicates the desired frequency.

8.5 Search about this point until the wanted station is heard.

8.6 Tune exactly to the "centre" of the station signal, otherwise reception will be noisy and/or distorted.

8.7 Adjust the VOLUME CONTROL for suitable volume.

8.8 Adjust TONE CONTROL for most pleasing tone, remembering that speech is most intelligible of the control is in the "high pitched" position.

9. Performance Data.

9.1 Overall sensitivity:

The following is a table of the sensitivity expressed in microvolts, modulated 30% at 400 cps. R.F. input, when using 400 ohm non-inductive resistor as a dummy aerial and to deliver 500 milliwatts (½ watt) to a 500 ohm non-inductive resistor connected across the "one speaker" output terminals. It will be noted that in Section (10) the loudspeaker is used as the output load, it's impedance at 400 cps being sufficiently close to 500 ohms for alignment purposes.

Band	Microvolts
1600 to 550 kilocycles	5—8
6 to 12 megacycles	15—20
12 to 17 megacycles	15—20
16 to 24 megacycles	15—20

9.2 I.F. Sensitivity.

The I.F. sensitivity of the receiver is such that 70 microvolts, modulated at 400 cps to a depth of 30%, applied between the control grid of valve V2A and chassis will deliver 50 milliwatts in a non-inductive resistance of 500 ohms connected across the "one speaker" output terminals. It will be noted that in Section (10) the loudspeaker is used as the output load, it's impedance at 400 cps being sufficiently close to 500 ohms for alignment purposes.

9.3 Power Output.

The receiver delivers a power output of not less than 2.5 watts to a non-inductive resistance of 500 ohms connected across the "one speaker" terminals, the measurement being made at a frequency of 400 cps.

10 Alignment Data.

10.1 General.

This receiver has been very carefully aligned at the factory and no realignment should be attempted until it has been definitely determined that this is the cause of the receiver not operating properly. Alignment procedure should only be carried out by experienced personnel and the following equipment will be necessary.

10.11. A Signal Generator capable of tuning 455 kilocycles to 24 megacycles, and preferably having an attenuator calibrated in microvolts.

10.12. An output meter having a range of 20 or 30 volts A.C. and a total resistance of not less than 10,000 ohms, i.e., 500 ohms per volt when the range is 20 volts.

10.13. A non-inductive resistance, to be used as dummy aerial, and to have a resistance such that when connected in series with the Signal Generator the total resistance is 400 ohms. A commercial carbon resistor is satisfactory for this purpose.

10.14. A screwdriver for the adjustment of I.F. trimmers.

10.15. The insulated R.F. trimmer wrench supplied with each AEW1 receiver.

10.2 I.F. Alignment.

10.21. Connect the "live" signal generator lead to the control grid (top cap) of V2A (6K8) and the earth lead of the signal generator to the receiver chassis frame.

10.22. Connect the output meter in parallel with the loudspeaker.

10.23. Adjust signal generator to 455 K.C.

10.24. Adjust semi-fixed condensers C16D, C16C, C16B and C16A in that order for maximum reading on the output meter.

10.25. Between 200 and 250 microvolts input should deliver 500 milliwatts to the loudspeaker, that is 15.8 volts across its terminals.

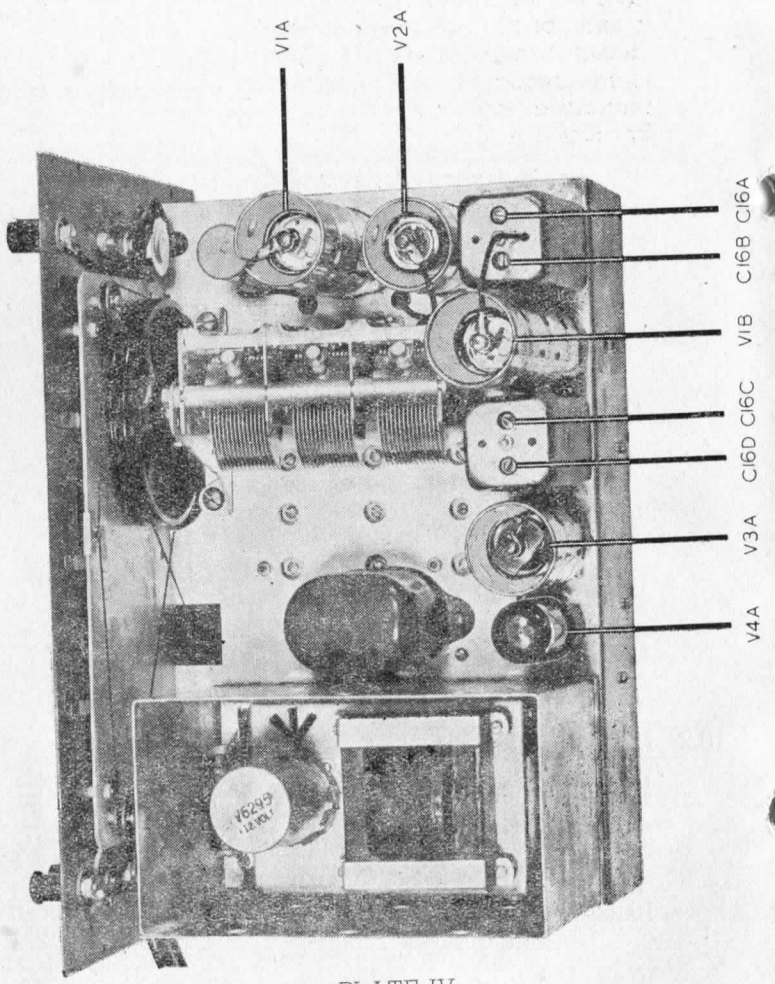


PLATE IV.

10.3 R.F. Alignment.

10.31. General.

(a) Connect the "live" signal generator lead in series with the dummy aerial, described in Section 10.13, to the aerial terminal of the receiver.

(b) Connect the output meter across the loudspeaker terminals.

(c) The sensitivity of the various bands is given in Section 9.1.

10.32. 550 to 1600 kilocycle band.

(a) Adjust signal generator to 1600 kilocycles, tune receiver to 1600 kilocycles, then adjust trimmer C4L for maximum signal.

(b) Adjust C4H and C4D for maximum signal.

(c) Adjust signal generator to 600 kilocycles, tune set to 600 kilocycles, and then adjust trimmer C12B for maximum output, at the same time "following" the signal with the tuning knob of the set.

(d) Repeat adjustment 10.32 (a).

10.33. 6 to 12 megacycle band.

(a) Adjust signal generator to 12 megacycles, tune receiver to 12 megacycles, then adjust trimmer C4K for maximum signal.

(b) Adjust trimmers C4G and C4C for maximum output. It will be noted that there are two positions of trimmer C4G, where the output rises to a maximum. It is IMPORTANT to use the position where this trimmer has a maximum capacity, that is turned furthest clockwise.

(c) Adjust signal generator to 6 megacycles, tune receiver to 6 megacycles, and adjust padding condenser C12A for maximum signal, at the same time "following" the signal with the receiver tuning control.

10.34. 12 to 17 megacycle band.

(a) Adjust signal generator to 17 megacycles, tune receiver to 17 megacycles, then adjust trimmer C4J for maximum signal.

(b) Adjust trimmers C4F and C4B for maximum signal. When adjusting C4F observe caution as set out in 10.33 (b).

(c) A fixed padder is used on this band, and therefore, the only adjustment necessary is as outlined in (a) and (b).

10.35. 16 to 24 megacycle Band.

(a) Adjust signal generator to 24 megacycles, tune receiver to 24 megacycles, and adjust trimmer C4I for maximum signal.

(b) Adjust trimmers C4E and C4A for maximum output. When adjusting trimmer C4E observe the caution as set out in 10.33 (b).

(c) A fixed padder is used on this band, therefore the adjustments in (a) and (b) are the only ones necessary.

PLATE V.

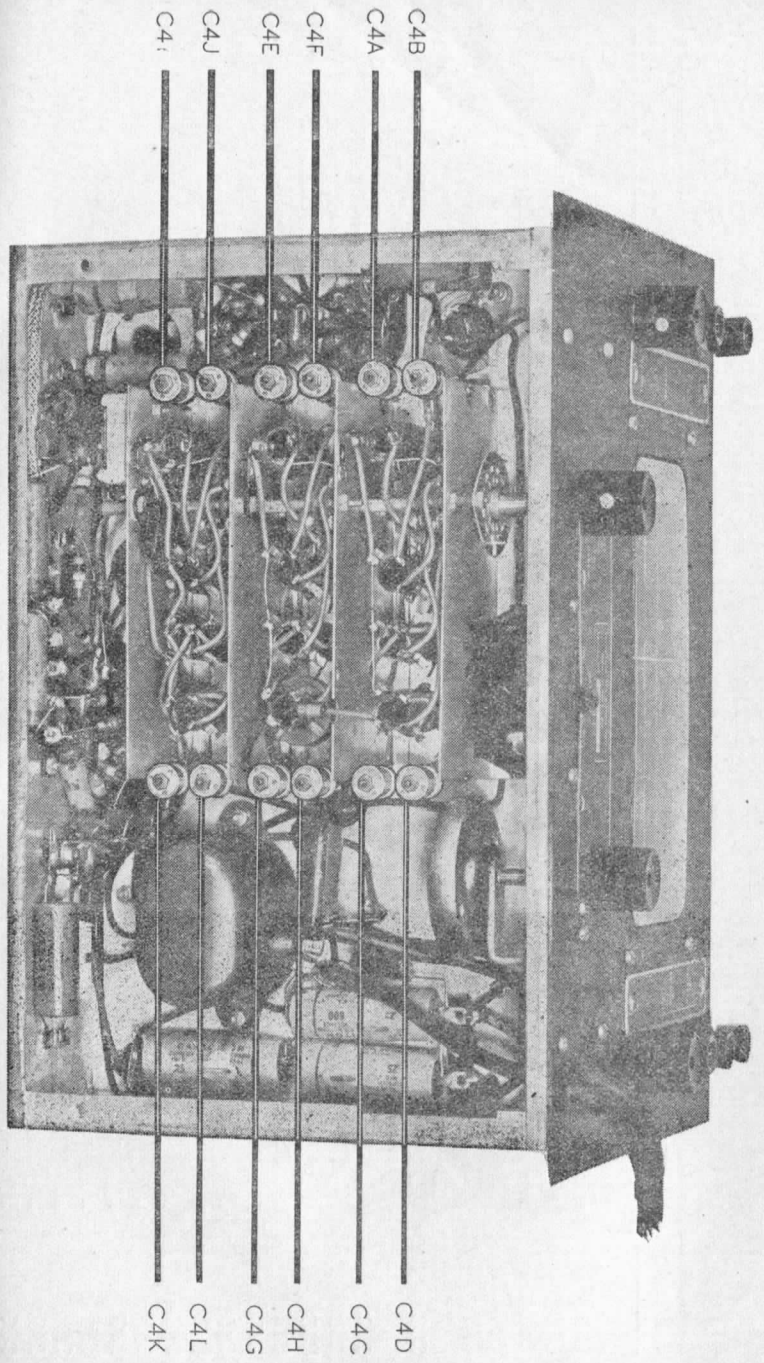


Table I.

TABLE OF CONDENSER VALUES.

Schem. Ref.	Type	Value	Voltage	Tolerance	Function.
C1A) C1B) C1C)	Variable	.00044 mfd.	——	——	Ganged Tuning Condenser
C2A	Silvered Mica	100 mmfd	——	± 2%	Band-Spread Condenser Aerial Stages, SW2 and SW3
C2B	" "	100 mmfd	——	± 2%	Band-Spread Condenser Detector Stage, SW2 SW3
C2C	" "	100 mmfd	——	± 2%	Band-Spread Condenser Oscillator Stage, SW2 and SW3
C3A	" "	200 mmfd.	——	± 2%	Band-Spread Condenser Aerial Stage, SW1
C3B	" "	200 mmfd.	——	± 2%	Band-Spread Condenser Detector Stage, SW1
C3C	" "	200 mmfd.	——	± 2%	Band-Spread Condenser Oscillator Stage, SW1
C4A	Semi Fixed	3-30 mmfd.	——	——	R.F. Trimmer, SW3
C4B	" "	3-30 mmfd.	——	——	R.F. Trimmer, SW2
C4C	" "	3-30 mmfd.	——	——	R.F. Trimmer, SW1
C4D	" "	3-30 mmfd.	——	——	R.F. Trimmer, B.C.
C4E	" "	3-30 mmfd.	——	——	Detector Trimmer, SW3
C4F	" "	3-30 mmfd.	——	——	Detector Trimmer, SW2
C4G	" "	3-30 mmfd.	——	——	Detector Trimmer, SW1
C4H	" "	3-30 mmfd.	——	——	Detector Trimmer, B.C.
C4I	" "	3-30 mmfd.	——	——	Oscillator Trimmer, SW3
C4J	" "	3-30 mmfd.	——	——	Oscillator Trimmer, SW2
C4K	" "	3-30 mmfd.	——	——	Oscillator Trimmer, SW1
C4L	" "	3-30 mmfd.	——	——	Oscillator Trimmer, B.C.
C5A	Tubular Paper	.05 mfd.	400v.	± 20%	AVC R.F. Bypass, R.F. Stage
C5B	" "	.05 mfd.	400v.	± 20%	AVC R.F. Bypass, Detector, and I.F. Stage
C6A	" "	.05 mfd.	600v.	± 20%	R.F. Bypass, Cathode V1A
C6B	" "	.05 mfd.	600v.	± 20%	R.F. Bypass, Cathode V2A
C6C	" "	.05 mfd.	600v.	± 20%	R.F. Bypass, Cathode V1B
C6D	" "	.05 mfd.	600v.	± 20%	Tone Control Condenser
C7A	" "	.1 mfd.	600v.	± 20%	Screen Bypass, V1A, V2A, V1B
C7B	" "	.1 mfd.	600v.	± 20%	H.T. R.F. Bypass
C8A	Mica	.0001 mfd.	400v.	± 20%	Grid Condenser, Triode Section V2A
C8B	"	.00005 mfd.	400v.	± 20%	Anode Coupling Condenser Triode Section V2A
C8C	"	.0001 mfd.	400v.	± 20%	R.F. Filter, Diode Load
C8D	"	.0001 mfd.	400v.	± 20%	AVC Diode Coupling
C8E	"	.0001 mfd.	400v.	± 20%	2nd Detector Anode, R.F. Bypass
C9A	"	.006 mfd.	400v.	± 10%	Padder, 16 to 24 M.C. Band
C10A	"	.0035 mfd.	400v.	± 10%	Padder, 12 to 17 M.C. Band
C11A		.003 mfd.	400v.	±10 %	Padder, 6 to 12 M.C. Band
C12A)	Semi Fixed	220 mmfd, max	——	——	Padder, 6 to 12 M.C. Band
C12B)	" "	220 mmfd, max	——	——	Padder, 550 to 1600 K.C. Band
C13A	Mica	.0003 mfd.	400v.	± 10%	Padder, 550 to 1600 K.C. Band
C14A	Tubular Paper	.25 mfd.	400v.	± 30%	L.T. R.F. Bypass
C14B	" "	.25 mfd.	400v.	± 30%	L.T. R.F. Bypass
C14C	" "	.25 mfd.	400v.	± 30%	VIB. L.T. R.F. Bypass
C14D	" "	.25 mfd.	400v.	± 30%	H.T. R.F. Bypass
C15A	Mica	.004 mfd.	400v.	—20% +50%	L.T. R.F. Bypass
C15B	"	.004 mfd.	400v.	—20% +50%	L.T. R.F. Bypass
C15C	"	.004 mfd.	400v.	—20% +50%	VIB. L.T. R.F. Bypass
C15D	"	.004 mfd.	400v.	—20% +50%	R.F. Bypass Anode V4A

Table II.
TABLE OF RESISTOR VALUES.

Schem. Ref.	Type	Value	Tolerance	Wattage	Function.
R1A	Carbon, Fixed	300 ohms	± 20%	1/3	Cathode Resistor, V1A
R1B	" "	300 ohms	± 20%	1/3	Cathode Resistor, V1B
R2A	" "	200,000 ohms	± 20%	1/3	AVC Decoupling, R.F. Stage
R2B	" "	200,000 ohms	± 20%	1/3	Anode Load, V3A
R3A	" "	50,000 ohms	± 20%	1/3	Grid Leak, Oscillator
R3B	" "	50,000 ohms	± 20%	1/3	R.F. Filter, Diode Load
R4A	" "	200 ohms	± 20%	1/3	Cathode Resistor, V2A
R5A	" "	25,000 ohms	± 20%	1/3	Anode Feed, Oscillator
R6A	" "	15,000 ohms	± 20%	1½	Screen Dropper, V1A, V2A, V1B
R7A	" "	.5 meghom	± 20%	1/3	Diode Load
R7B	" "	.5 meghom	± 20%	1/3	Grid Leak, V4A
R8A	" "	1 meghom	± 20%	1/3	AVC Feed
R8B	" "	1 meghom	± 20%	1/3	AVC Diode Load
R9A	Carbon Potentiometer	10,000 ohms	——	——	Tone Control
R10A	Carbon, Fixed	5-10 megohms	± 20%	1/3	Grid Leak, V3A
R11A	Carbon Potentiometer	½ megohm	——	——	Volume Control
R12A	Carbon, Fixed	400 ohms	± 20%	½ to 1	Cathode Resistor, V4A

Table I (Continued.

Schem. Ref.	Type	Value	Voltage	Tolerance	Function
C16A)	Semi Fixed	140 mmfd. max.	——	——	Trimmer, Primary 1st I.F. Transformer
C16B)	" "	140 mmfd. max.	——	——	Trimmer, Secondary 1st I.F. Transformer
C16C)	" "	140 mmfd. max.	——	——	Trimmer, Primary 2nd I.F. Transformer
C16D)	" "	140 mmfd. max.	——	——	Trimmer, Secondary 2nd I.F. Transformer
C17A	Mica	.00005 mfd.	400v.	—20% +50%	R.F. Bypass, Diode Load
C18A	Tubular Paper	.02 mfd.	600v.	± 20%	Diode Load, Audio Coupling
C18B	" "	.02 mfd.	600v.	± 20%	Coupling, Grid V3A
C18C	" "	.02 mfd.	600v.	± 20%	Coupling, Grid 4VA
C19A)	Electrolytic	10+10 mfd.	450v.	——	H.T. L.F. Filtering
C19B)	"	10+10 mfd.	450v.	——	H.T. L.F. Filtering
C20A	"	25 mfd.	25v.	——	Audio Bypass, Cathode V4A
C21A	Mica	.01 mfd	1800v.	± 20%	Buffer Condenser

Table III.

TABLE OF INDUCTANCES, CHOKES AND TRANSFORMERS.

Schematic Reference	Function.
L1A	R.F. Coil, 16 to 24 megacycle Band
L2A	R.F. Coil, 12 to 17 megacycle Band
L3A	R.F. Coil, 6 to 12 megacycle Band
L4A	R.F. Coil, 550 to 1600 kilocycle Band
L5A	Detector Coil, 16 to 24 megacycle Band
L6A	Detector Coil, 12 to 17 megacycle Band
L7A	Detector Coil 6 to 12 megacycle Band
L8A	Detector Coil, 550 to 1600 kilocycle Band
L9A	Oscillator Coil, 16 to 24 megacycle Band
L10A	Oscillator Coil,12 to 17 megaclcle Band
L11A	Oscillator Coil, 6 to 12 megacycle Band
L12A	Oscillator Coil, 550 to 1600 kilocycle Band
L13A	1st I. F. Transformer
L13B	2nd I.F. Transformer
L14A	Vib. L.T. R.F. Choke
L15A	Vib. H.T. R.F. Choke
L16A	Filter Reactor
T1	Vibrator Power Transformer
T2	Output Transformer

Table IV.

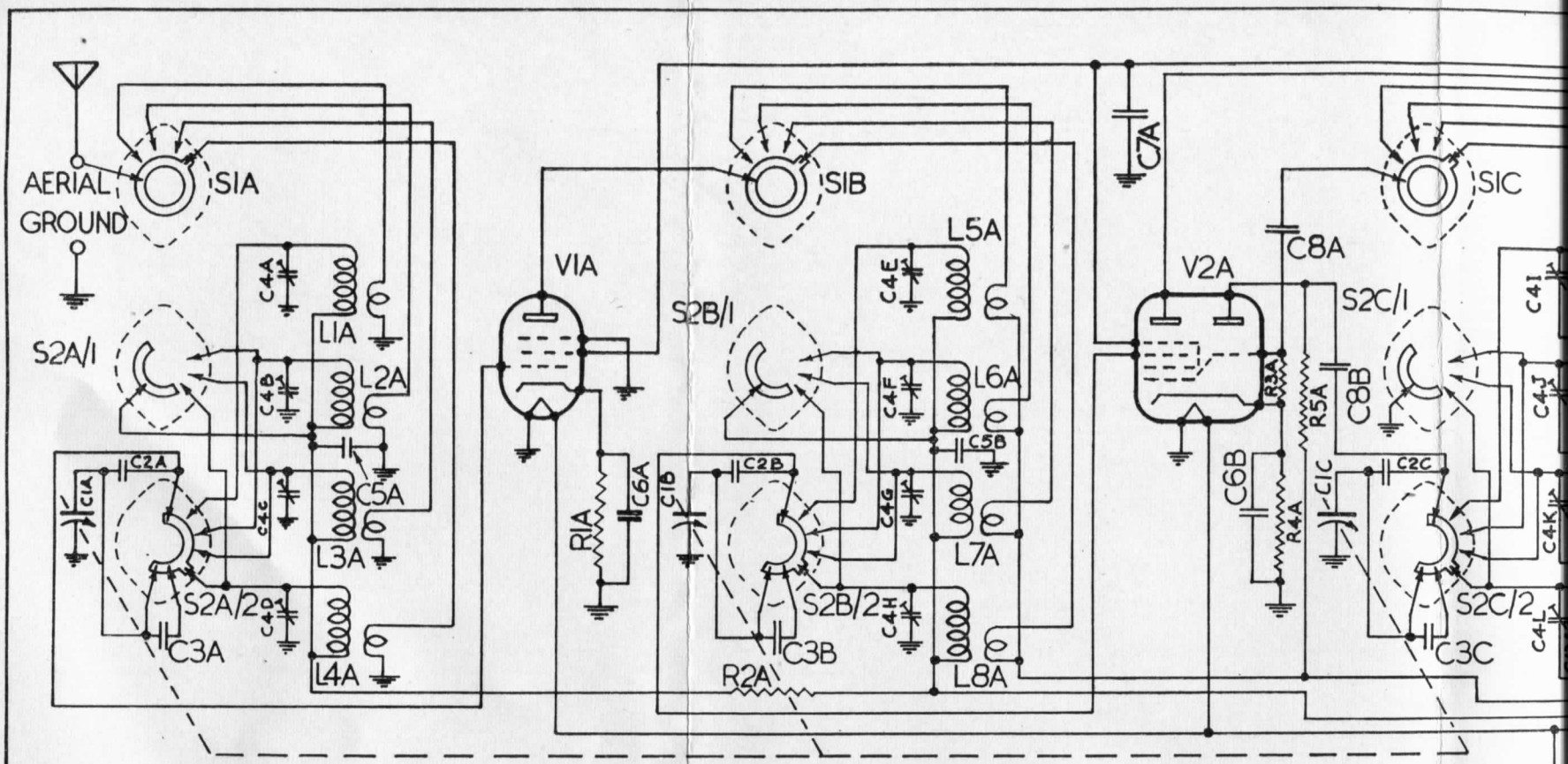
TABLE OF SWITCHES.

Schematic Reference	Type	Function.
S1A	Rotary, Single Pole 4 way	Aerial Coil Selector
S1B	Rotary, Single Pole 4 way	Detector Coil Primary Selector
S1C	Rotary, Single Pole 4 way	Oscillator Reaction Winding Selector
S2A/1	Rotary, 3 pole shorting	Short Circuit Unused Aerial Coil Secondaries
S2B/1	Rotary, 3 pole shorting	Short Circuit Unused Detector Coil Secondaries
S2C/1	Rotary, 3 pole shorting	Short Circuit Unused Oscillator Coil Secondaries
S2A/2	Rotary, Single Pole 4 way Special Shorting	R. F. Coil Secondary Selector
S2B/2	Rotary, Single Pole 4 way Special Shorting	Detector Coil Secondary Selector
S2C/2	Rotary, Single Pole 4 way Special Shorting	Oscillator Coil Secondary Selector
S4A	10 amp. S.P.S.T.	Battery Switch

Table V.

TABLE OF VALVES.

Schematic Reference	Type	Function.
V1A	6U7G	Screen Grid R.F. Amplifier
V2A	6K8GT	Hexode-Triode Mixer Oscillator
V1B	6U7G	Screen Grid I.F. Amplifier
V3A	6Q7GT	Duo-Diode Triode 2nd Detector 1st Audio Amplifier
V4A	6V6GT	Beam Tetrode Power Output



NOTE 1 S1A S1B S1C are the front switch sections in each coil box.
S2A/1 S2B/1 S2C/1 are the front contacts of the rear switch section in each coil box.
S2A/2 S2B/2 S2C/2 are the rear contacts of the rear switch section in each coil box.

NOTE 2 Waveband switch shown in the 1600–550 KC. band position.
Shown as viewed from rear of chassis and therefore
turns anticlockwise 30° for 6-12 MC. and so on.

NOTE 3 In some receivers R9A is ·5meg, C6C is ·0005 mfd. and is
connected to the grid of V4A instead of to anode as shown.

RECEPTION SET A.E.W. I. (NZ) – SCHEMATIC DIAGRAM

FIGURE II.

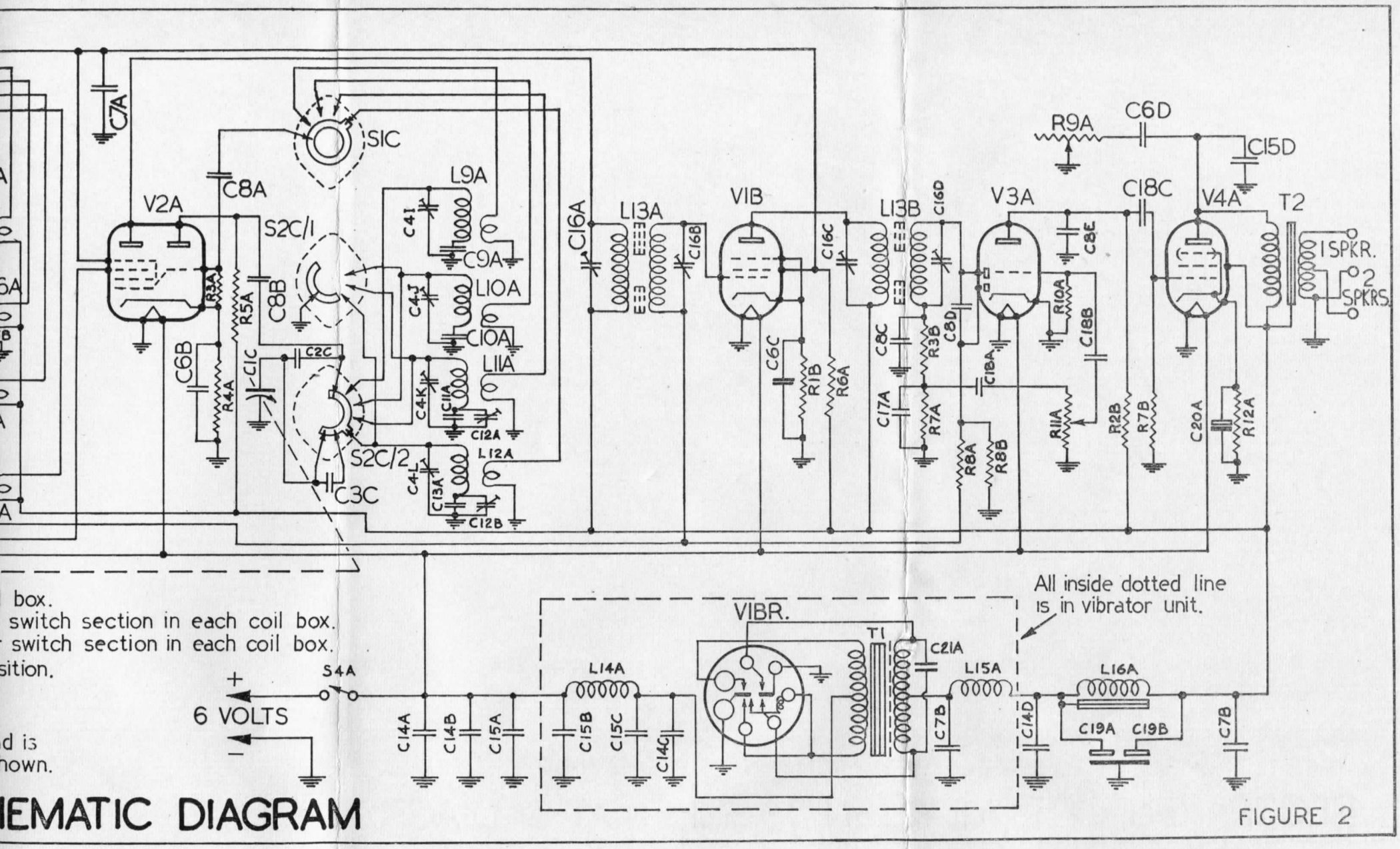


FIGURE 2

FIGURE II.