Australian Official

RADIO SERVICE MANUAL

Wartime Economy Standard

Vol. 3

Circuit Book of Standard

1939 Receivers

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July 3- 1945
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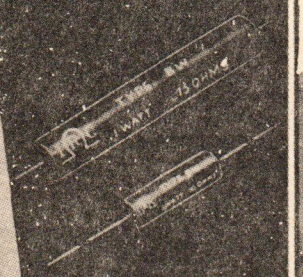
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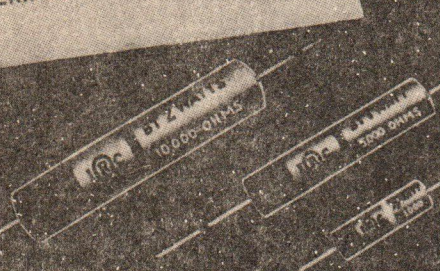
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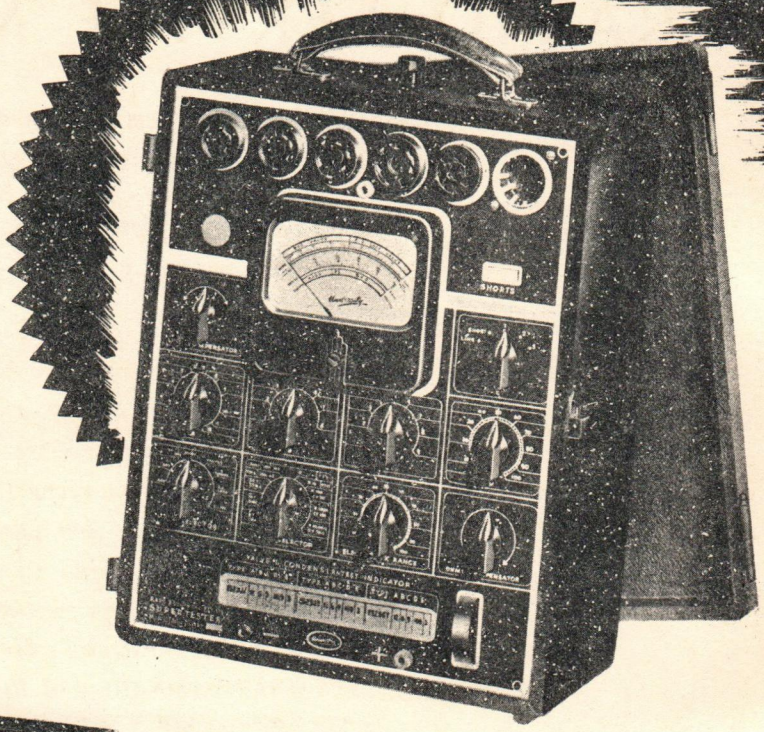
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with Circuit Diagrams

second edition

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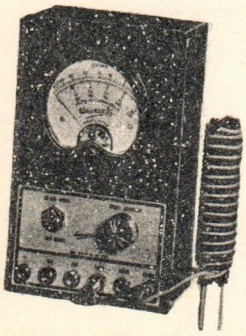
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Foreword . . .

In the compilation of this issue we are indebted to the servicemen of Australia for their many constructive suggestions. No trouble has been spared to make this book complete as to the range of national 1939 receivers, to provide in concise form all essential data, to carefully check all the material, and to group models for quick, easy reference.

This book provides a unique service in Australia in that it represents the sole and only means whereby servicemen can secure each year's national receiver circuits within the covers of one volume. The remarkably fine reception which was given the two preceding volumes indicates that these served a most useful purpose, and in thanking our many supporters for their confidence, we desire to express our appreciation of the assistance given us by the manufacturers of Australia's National Receivers, whose co-operation makes the publication of this book possible.

There are four volumes of the "Australian Radio Service Manual" available covering Australia's National Receivers from 1937 to 1941. These volumes are: No. 1 (1937 circuits) No. 2 (1938 circuits); No. 3 (1939 circuits); No. 4 (1940/41 circuits).

Any or all of these volumes are available from your wholesaler, trade journal, bookseller, or the publishers: The Strand Press Pty. Ltd., Dunstan House, Elizabeth Street, Brisbane.

While the contents of this book have been carefully checked, the publishers cannot hold themselves responsible for any errors or omissions.

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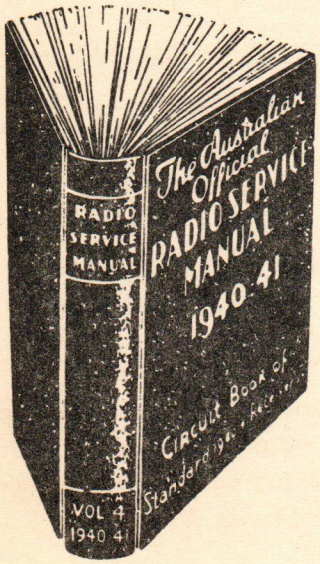
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It enables you to refer to national receiver circuits from 1937 to 1941 at a moment's notice. No guesswork, no calculations—there before you is the manufacturers' circuit and data.

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OUR THANKS

The publishers desire to express their appreciation of the generous co-operation extended by Australian Radio Manufacturers in making available for publication the circuits and data of their individual models, thus making possible the publication of this, the third edition of Australia's Official Radio Service Manual.

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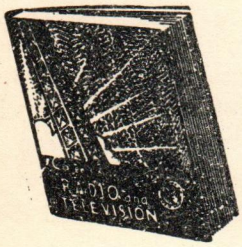
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How to Get Maximum Service from the Manual

If you turn to the many pages of circuits and their essential characteristics you will notice many schematic drawings of the circuits employed by various manufacturers in many different models. In most cases you will find that voltages and current flow at vital points in the circuit are given, thus enabling the serviceman with his equipment to check up his set against a set which has just left the production line, and when he finds the point where the set he is servicing differs widely in its readings from those the manufacturer lays down he begins to check up that particular circuit and soon finds the fault, which may be in a valve, a resistor, a condenser, a coil or a transformer. In some cases where this information is not given you will find other information such as resistance measurements and component values that will be almost as useful.

In the case of each receiver circuit you will find a list of components with the diagram code letter and number for each component with that component's value beside it: while in the case of other circuits the symbol for each component has the value clearly marked beside it so as there can be no doubt that the serviceman will know just what capacity each condenser should have or what ohmic resistance each resistor should have.

Perhaps some servicemen will wonder why we have not printed photographs of the completed chassis or under chassis diagrams. The reason is that we deem them unnecessary even if space happened to be available, for you as the serviceman or dealer have the defective chassis in front of you, you can see the whole top of chassis layout and identify each component and valve, and then when you turn the chassis over you have the actual component array and chassis wiring before you ready to be translated to the diagram instead of the slower way of schematic diagram to under chassis diagram and then to the actual chassis.

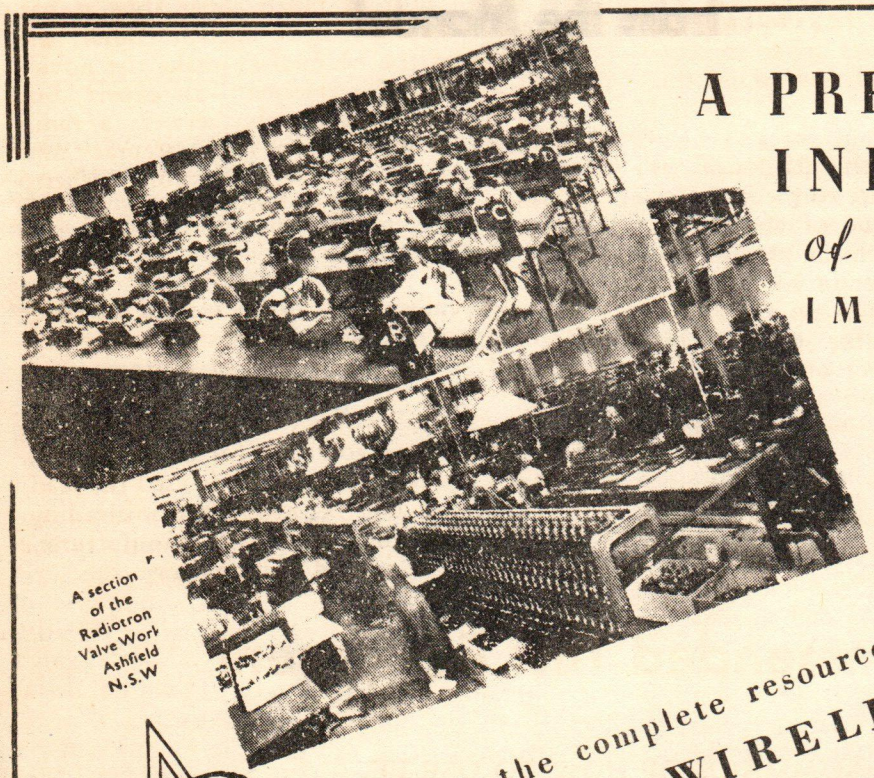
In reading the diagram into the actual wiring of the receiver we suggest you first use your experience to diagnose the trouble and then check the particular suspected circuit at that stage against the diagram and voltage current, and component values given in the Manual. If your diagnosis proves incorrect, then check your chassis stage by stage against the circuit diagram and the data given with that particular circuit.

Of course it is not our intention to suggest that you alter your present method of servicing, such as checking valves as the first step, testing the audio amplifier as a second step and so on, but remember we are trying to help someone less experienced than yourself, in fact our ideal way of testing a receiver is to form some opinion as to what is wrong first of all, then check the valves, replacing defective and doubtful ones, and if in our opinion valves are the trouble to try the set, but if this is not the fault systematically test each condenser, resistor and coil one by one and stage by stage, and it is here that the Manual is of such great value to all who are servicing a radio set, as the value of each and every component and the circuit associated with it is known.

If you are called upon to service any particular brand and model of radio receiver check over the circuit, component values and valves used before you get to the job or open up the chassis, for being acquainted with the design of the set you are about to service you will be in a much better position to diagnose the trouble and locate and repair it quickly and efficiently. Some manufacturers give the colour code of their wiring which is worth studying as it helps you recognise each circuit quickly, others give the catalogue number of each component used in the set. This is of great value as it helps you to order the correct replacement part which is most important in receivers of special or unusual design.

In the service data and circuits you will notice that some manufacturers use the letter "E" to denote voltage at any particular point

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so that Ep; Esc; and Ek denotes plate, screen and cathode voltage respectively, similarly "I" is used to denote current and so Ip; Isc; If; denote plate, screen and filament or heater current respectively, and as these voltage and current readings in all circuits are so important it is well that all should understand this nomenclature.

In certain circuits each component is numbered so that by reference to the key provided in the data the value of these components can be found. Attention should also be paid to the fact that certain circuits have the voltage at each particular point marked on the circuit, while in a table adjoining the circuit diagram the resistance of each coil is marked, so that with the aid of the low resistance reading ohmmeter these values may be checked.

If you have a particularly difficult problem see if you can find a suggestion in the many other special servicemen's articles that have been included, for it is our honest belief that with your knowledge and the data we have included in this Manual the lot of the serviceman will be much easier than it has ever been before. It is not, of course, the intention of the Manual to make the novice or inexperienced serviceman, an expert, but to help every person who services a radio set to do so with greater speed accuracy and assurance than has been possible hitherto without a standard reference work of this kind.

Remember that all tests must be made with prescribed apparatus, such as recommended in our article on test equipment, or suggested by the manufacturers themselves, for example all voltage readings are read on a 1000 ohm per volt scale for D.C. readings, and if a lower ohmage meter is used the readings obtained will be wrong and misleading. Be accurate and follow the manufacturer's instruction, is a good radio axiom.

Recommended Test Equipment

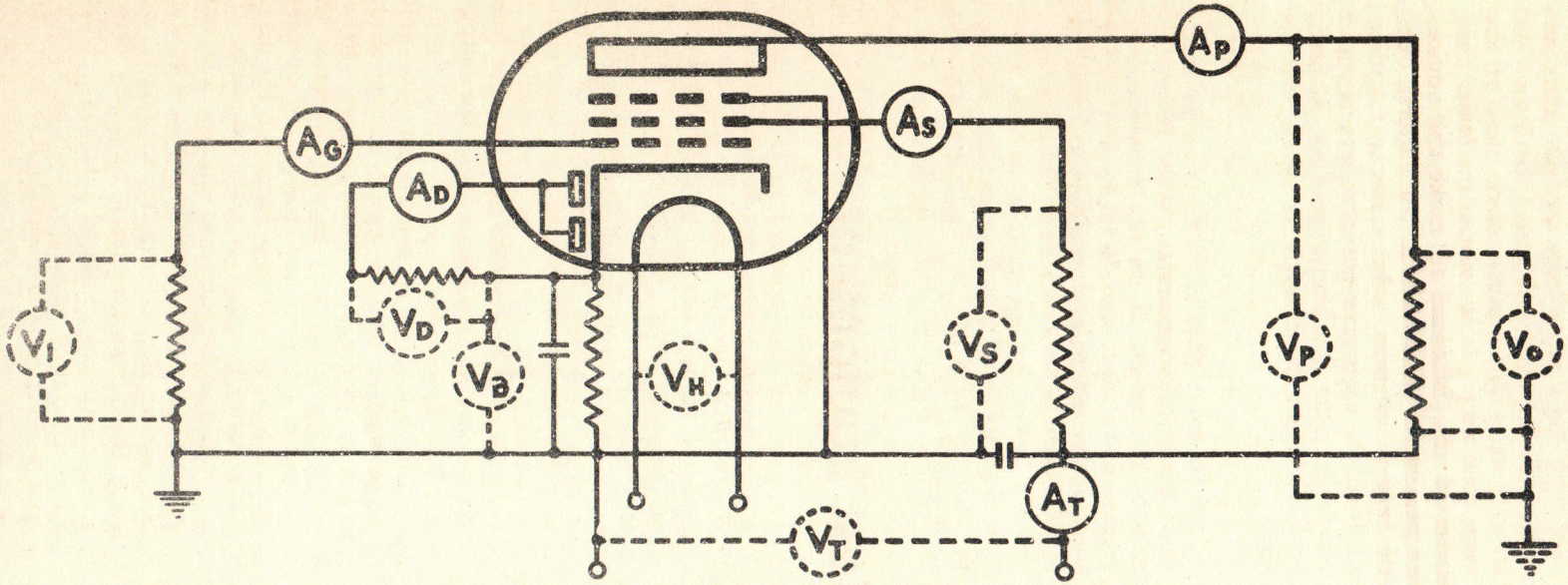
A SUMMARY OF HOW TO USE IT.

This Service Manual has been produced to assist the practising serviceman to give quicker and better service to his employer, his customer and himself by assisting him with essential data in an easily accessible form. An experienced serviceman will hardly require this discussion on Test Equipment, as most likely he has already assembled an efficient kit, which he knows how to use to greater advantage than it would be possible for any Service Manual Editor to tell him. But we realise that this Manual will be referred to by radio dealers, radio jobbers, apprentices and servicemen of the future who have very little technical experience, and will find a lead such as we give in this summary of incalculable value, helping them on the right road to efficent and speedy service, enabling them to get even more value from the rest of the Manual than they could hope to obtain otherwise.

It is not our intention to give a complete thesis on Service Test Equipment. The purpose of this discussion is to lay down what is considered to be the minimum apparatus with which any serviceman can give efficient service, and then give a few practical hints on how this gear may be used to the best advantage.

The Apparatus

The first piece of apparatus for the servicemen's Test Equipment is a Volt-Ohm-Milliampere Meter, with a 1000 ohm per volt, Voltage Ranges of 0 to 10; 0 to 50; 0 to 100; 0 to 250, and 0 to 500 volts D.C.; 0 to 10 and 0 to 500 volts A.C.; 0 to 1; 0 to 10; 0 to 50; 0 to 100 and 0 to 250 milliamperes; 0 to 100 ohm low-reading Ohmmeter Scale and an 0 to 100,000 or more Ohmmeter Scale. The second piece of apparatus is a Portable Modulated Signal Generator, capable of covering without gaps all frequencies from 100 to about 23,000 k.c., complete with dummy antenna, accurate attenuator and a three range output meter, 0-10, 0-25 and 0 to 50 volts. Thirdly, an accurate Valve Checker for testing a complete range of valves as used in



METERS: WHERE TO PUT THEM.

This diagram is intended to refresh the memory of users with regard to fundamental practice. A diode-pentode was chosen for illustration since its elements permit broad analysis of meter placement in virtually all tube circuits.

Because modern testing equipment is designed to conserve the harrassed serviceman's thinking-time there is always danger that the individual meters comprising such instruments may not be used to best advantage ...

VOLTAGE MEASUREMENTS.

VB (Grid Bias) High resistance voltmeter (0-10-50)
VD (Diode Voltage) High-resist. voltmeter or v.t.v.m. (0-1-5)
VH (Heater Voltage) Low scale of a.c. voltmeter (0-10-25)
VI (Signal Voltage) Output meter or v.t.v.m.
VO (Output Voltage) Output meter or v.t.v.m.
VP (Plate Voltage) High resistance voltmeter (0-250-500)
VS (Screen Voltage) High resistance voltmeter (0-100-500)

CURRENT MEASUREMENTS.

AD (Rectified Current) Microammeter or low-range ma (0-0.05-1.0)
AG (Grid Current) Microammeter or low-range ma. (0-0.05-1.0)
AP (Plate Current) Milliammeter (0-5-100).
AS (Screen Current) Low-range d.c. milliammeter (0-1-10)
AT (Total Current) Low-range d.c. milliammeter (0-1-10)

Actual voltages slightly higher than meter reading, accuracy dependent upon resistance of instrument.

Australian designed radio receivers, or ready access to such an instrument at all times. A fourth piece of testing apparatus is a Condenser Tester suitable for testing mica, paper and electrolytic types of condensers and is a very valuable adjunct to the servicemen's kit, for, although it can be done without by using the other apparatus we have laid down, it saves so much time and avoids so many possible errors that it soon pays for the additional outlay it entails.

Using the Apparatus

Knowing what equipment the complete serviceman should have and a brief summary of its uses will be valuable at this juncture, although complete treatment of each individual unit is dealt with in Chapter 6 on General Service Information. First of all we have our Volt-Ohm-Milliampere Meter with many ranges, so consider what uses we can place this instrument to when servicing a radio receiver. Many of our circuit diagrams give plate, screen grid filament and output voltages, as well as other point to point voltages, and the voltmeter enables you to check these for all receivers by placing them in the positions indicated in the diagram, "Meters—Where to put them." The large number of D.C. ranges are necessary for, as a serviceman, you will be called upon to test voltage from 1.5 volts up to 500 volts in many steps in the course of an ordinary day's service work. In fact, the uses of a voltmeter are so numerous that it is impossible to list them, but experience will teach you how to get maximum service from your voltmeter. The A.C. scales will enable you to check A.C. valve filament voltages, mains input voltages, output in A.C. voltages from power transformers and generators. All voltage tests for both D.C. and A.C. tests being made under working conditions.

The Ohmmeter is perhaps the most valuable section of the combination meter, as it, first of all, enables you on the low range scale to test the continuity of tuning coils intermediate frequency transformers, R.F. chokes, speaker-voice coils, filament or heater circuits, low resistance rheostats and bias resistors, and many other parts in a radio receiver and associated apparatus too numerous to mention. With the high ohm scale you are enabled to test resistors, transformer windings of the audio and speaker input type, field coils, coupling and filter chokes, and obtain an indication as to the condition of fixed condensers as well as many other simple applications on the service bench. The Manual circuit data gives you all the component values, and as a serviceman with an Ohmmeter you can quickly check most of these in turn and so often locate the fault.

The Milliamperemeter ranges amongst other things, enables you to test the plate current, the screen current, or the total current flowing in each particular circuit by merely placing the Milliamperemeter section of the combination with an appropriate scale range in the circuit under test, in a manner shown in the diagram, "Meters—Where to put them," on page twelve.

The Milliamperemeter enables you to make a rough check of valve efficiency, circuit current values as laid down by the valve and circuit designers, and at the same time locate any existing fault and its cause.

Signal Generator

The Portable Signal Generator is really a miniature broadcasting station under the complete control of the serviceman, and is used to correctly align the various tuned stages of a receiver so that each type will beat in unison, although certain stages handle different frequencies to others. A dummy antenna has been specified so as the receiver is submitted to a set of conditions in its aerial circuit that would exist if the set was operated from a normal aerial under broadcasting conditions of reception. The attenuator is fitted to the Signal Generator because, when supplying a signal to radio receiving equipment, the sensitivity of which may vary over a very wide range, some means of varying the output of the oscillator is essential so as to keep the signal output from the receiver within the limits of the output-meter ranges.

The output meter is really an A.C. voltmeter used to read the signal voltage resulting from a given modulated input. When aligning a set with a Signal Generator the necessary trimmer and padder adjustments are made until, with a given input, the maximum overall output is obtained when the set is said to be peaked or aligned. The output meter provides a visual method of reading the output signal intensity accurately, because the human ear cannot accurately detect small variations of sound intensity. Other forms of output indicators such as Vacuum tube voltmeters and Cathode Ray units are used as output indicator in modern service equipment.

A NAME TO REMEMBER IN



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The serviceman uses his Signal Generator and its accessories to align all types of radio frequency and intermediate frequency circuits; to align oscillator circuits and pad them so as they will cover a wide band of frequencies at the correct alignment; to test valves under working conditions; to ascertain gain of audio amplifiers following the radio frequency side of a receiver; to test the efficiency of Automatic Volume Control circuits and, finally, to test the selectivity of any tuned circuit at radio frequencies.

The Valve Checker is the next piece of apparatus for consideration. It is our considered opinion that the serviceman's first step in most cases when called to service a receiver is to test the valves. The simplest and quickest way to do this is with a Valve Checker, and as Valve Checkers are available complete with the volt-ohm-milliamperemeter combination, the bulk of two instruments is avoided in the serviceman's kit. When you have established that the valves in a set under service are in good order, it is possible to proceed with the remaining components of the unit until the fault is located.

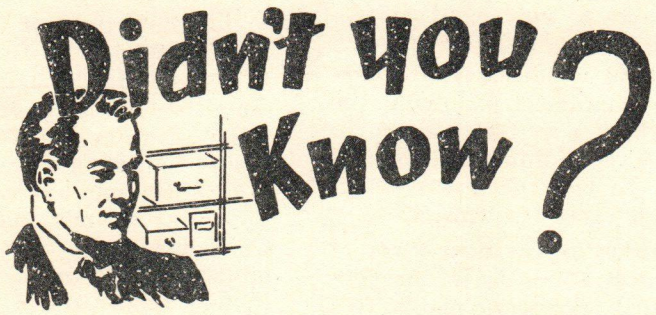
The final piece of test apparatus we have recommended is the Condenser Tester, which is suggested in the light of an alternative, because the Ohmmeter or the Milliamperemeter and Voltmeter, with the aid of the power supply output of the set, can be called upon to fulfil the job, but as modern servicing calls for quick, accurate and inexpensive work the Condenser Tester should be a part of the modern serviceman's test equipment, as it enables condensers of all types to be accurately and speedily tested for leakage, breakdowns and loss of capacity, this latter factor being very hard to judge by other methods. Fortunately, in this case also, Condenser Testers in combination with valve checker and volt-ohm-milliamperemeter is available at moderate cost.



OUR THANKS

The publishers desire to express their appreciation of the generous co-operation extended by Australian Radio Manufacturers in making available for publication the circuits and data of their individual models, thus making possible the publication of this, the third edition of Australia's Official Radio Service Manual.

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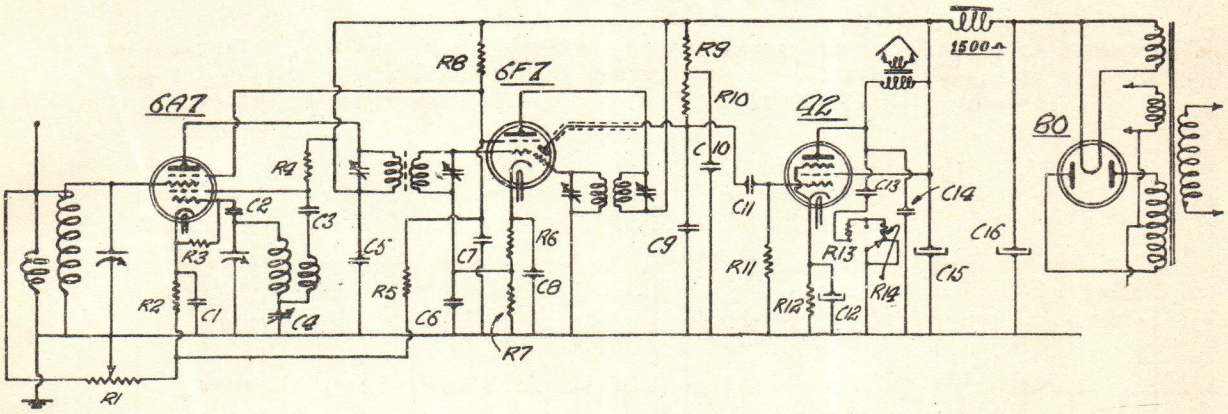
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AIRZONE 402

3/4 A.C. Broadcast Super



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C2 - 100 mmf mica
C3 - 1000 mmfmica
C4 - Adj. padder 5P
C5 - .1 mf 400V. Tub.
C6 - .02 mf 400V.Tub.
C7 - .1mf 400V. Tub.
C8 - .1mf 400V. Tub.

C9 - 250mmf mica
C10- .5mf 400V. Tub.
C11- .02mf 400V. Tub.
C12- 10mfelect.25V.W.
C13- .05mf 400V. Tub.
C14- 5000mmf mica
C15- 8mf elect.440V.W.
C16- 8mf elect.500V.W.

R1 - 5K ohms V.C.
R2 - 460 ohms P type
R3 - 50Kohms ¼W.
R4 - 30K ohms ½W.
R5 - 50K ohms ½W.
R6 - 500 ohms ½W.
R7 - 3500 ohms P type

R8 - 20K ohms 1W.
R9 - 50K ohms ½W.
R10- .25M ohms ½W
R11- .5M ohms ½W.
R12- 460 ohms P type
R13- 5K ohms ¼W.
R14- 15K ohms ¼W.

Valves: 6A7, Convertor. 6F7, I.F. amp. & det. 42, output. 80, rect.

VOLTAGE AND CURRENT TABLE.

VALVE	PLATE VOLTAGE	PLATE CURRENT	OSCILLATOR PLATE VOLTS	SCREEN VOLTAGE	SCREEN CURRENT	BIAS
6A7	235	2.2	125	100	4.7	4.3
6F7 I.F.	235	3.8		100	1.0	2.6
6F7 Det.	85	0.2				22.0
42	220	24		235	4.5	15.0
80	320					

I.F. 456 K.C.

Speaker Field = 1500 ohms.

All measurements with no signal. Volume control full on.

AIRZONE 403

Battery Broadcast Four.

C1 - .05mf 400V.Pap.
C2 - Adj.pad. 5Plate
C3 - 1000mmf mica
C4 - .1mf 400V. Pap.
C5 - .05mf 400V. Pap.
C6 - .1mf 400V. Pap.
C7 - .1mf 400V. Pap.
C8 - 100mmf mica
C9 - 100mmf mica

C10-50mmf mica
C11- .001+ .004mf 400V. Pap.
C12- .01mf 400V.Pap.
C13- .01mf 400V.Pap.
C14- 250mmf mica
C15- .25mf 400V.Pap.
C16- 5000mmf mica
C17- .1mf 400V.Pap.

R1 - 10K ohms ¼W.
R2 - 1M ohms ¼W.
R3 - 50K ohms ½W.
R4 - 50K ohms ½W.
R5 - 30K ohms ½W.
R6 - .1M ohms ½W.
R7 - 1M ohms ¼W.
R8 - 1M ohms ¼W.
R9 - 50K ohms ½W.

R10- .5Mohms ¼W.
R11- .5M ohms V.C.
R12- .25M ohms ½W.
R13- 1M ohms ½W.
R14- .5M ohms ½W.
R15- 180 ohms W/W
R16- 250 ohms W/W
R17- .25M ohms ½W.

MODEL 403 (Contd.)

Valves: 1C6 Convertor. 1C4 I.F. 1K6 det. and aud. 1D4 Output.

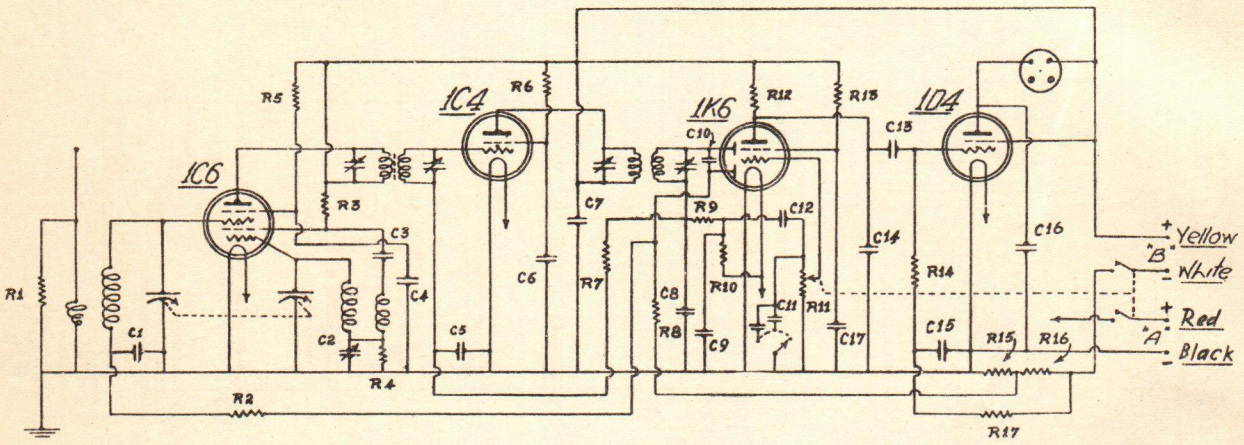
VOLTAGE AND CURRENT TABLE.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
1C6	130	1.2	50	2.3	40	3.3
1C4	130	2.0	42	0.6		0
1K6	30	0.26	18	0.1		0
1D4	127	3.6	130	0.8		5.25

Measurements at position of no signal and to chassis. I.F. 456 K.C. Permag. Speaker

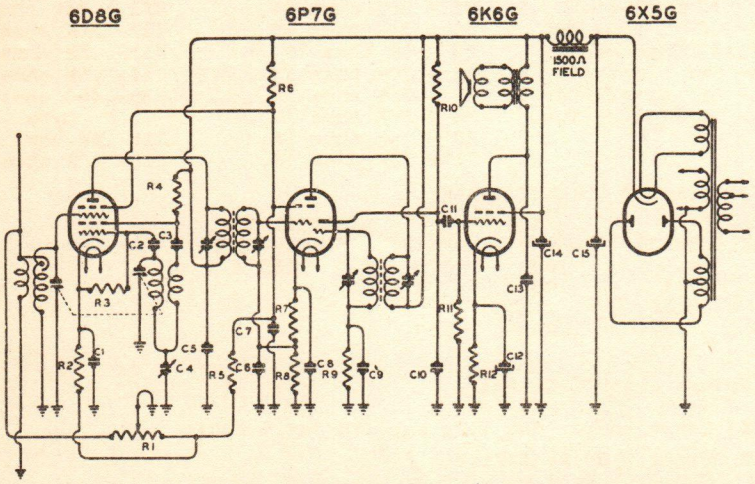
CONSUMPTION: No Signal 12M/A. Average Signal 9-10 M/A.

BATTERY LEADS: Red = A pos. Black = A neg. White = B neg. Yellow = B pos.135V.



AIRZONE 406

3/4 Broadcast A.C. Super.



Valves: 6A8G Convertor. 6P7G I.F. & det. 6K6G Output.
6X5G Rectifier

Measurements made at no signal and volume control full on.

I.F. 456 K.C. Speaker Field: 1500 ohms.

R1 - 5K ohms V.C.
R2 - 400 ohms Wire Wound
R3 - 50K ohms ½W.
R4 - 30K ohms ½W.
R5 - 50K ohms ½W.
R6 - 15K ohms W.
R7 - 500 ohms ½W.
R8 - 4K ohms ½W.
R9 - .5M ohms ½W.
R10- .25M ohms ½W.
R11- .5M ohms ½W.
R12- 460 ohms Wire Wound
C1 - .02mf 400V. Paper
C2 - 100mmf mica
C3 - 1000mmf mica
C4 - 5 Plate adj. padder
C5 - .1mf 400V. Paper
C6 - .02mf 400V. Paper
C7 - .02mf 400V. Paper
C8 - .02mf 400V. Paper
C9 - .02mf 400V. Paper
C10- 250mmf mica
C11- .01mf 400V. Paper
C12- 10mf elect. 40V.P.
C13- .01mf 400V. Paper
C14- 8mf elect. 500V.P.
C15- 8mf elect. 500V.P.

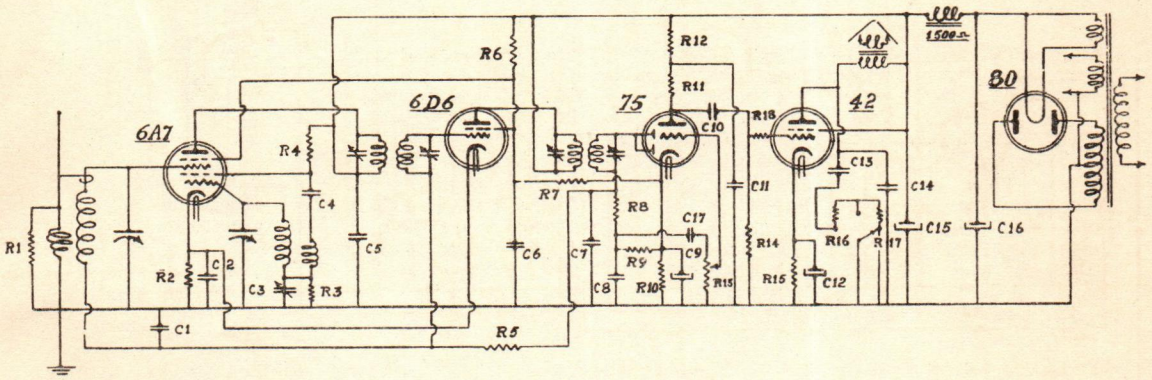
MODEL 406 (Contd.)

VOLTAGE AND CURRENT TABLE.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
6A8G	205	3.0	100	4.3	120	4.5
6P7G I.F.	205	3.7	100	1.1		2.5
" det.	130	0.2				20.5
6K6G	190	24	205	4.6		12.5
6X5G	output - 280V.					

AIRZONE 520

4/5 Broadcast A.C. Super



C1 - .1mf 400V. Tub.
C2 - .25mf 400V. Tub.
C3 - Adj. pad. 5P
C4 - 1000mmf mica
C5 - .1mf 400V.Tub.
C6 - .1mf 400V.Tub.
C7 - 100mmf mica
C8 - 100mmf mica
C9 - 10mf elect.25V.W.
C10- .02mf 400V.Tub.
C11- .5mf 400V.Tub.
C12- 10mf elect.25V.W.
C13- .05mf 400V.Tub.
C14- 5000mmf mica
C15- 8mf elect.440V.W.
C16- 8mf elect.500V.W.
C17- .02mf 400V.Tub.

R1 - 10K ohms ½W.
R2 - 200 ohms P type
R3 - 50K ohms ½W.
R4 - 30K ohms ½W.
R5 - 1M ohms ½W.
R6 - 10K ohms 1W.
R7 - 20K ohms ½W.
R8 - 50K ohms ½W.
R9 - .5m ohms ½W.
R17- 15K ohms ½W.
R10- 200 ohms P type
R11- .25M ohms ½W
R12- 50K ohms ½W
R13- .5M ohms V.C.
R14- .5M ohms ½W
R15- 460 ohms P type
R16- 5K ohms ½W
R18- 50K ohms ½W.

VOLTAGE AND CURRENT TABLE.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS
6A7	220	4.0	100	3.0	135
6D6	220	7.1	100	1.8	
75	70	0.35			
42	205	24	220	5.0	
80	Output - 310V.				

Measurements at no signal. Volume control on full.

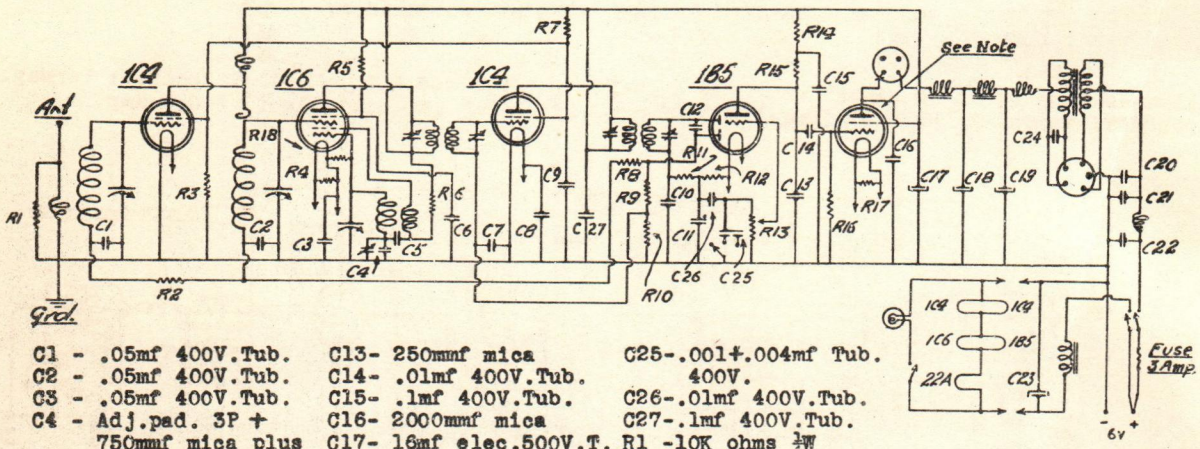
VALVES: 6A7 Convertor. 6D6 I.F. amp. 75 det.& audio
42 Output. 80 Rectifier.

I.F. 456 K.C.

Speaker field - 1500 ohm.

AIRZONE 523 & 523M

5-Valve Vibrator Broadcast



C1 - .05mf 400V.Tub.
C2 - .05mf 400V.Tub.
C3 - .05mf 400V.Tub.
C4 - Adj.pad. 3P + 750mmf mica plus or minus 3%
C5 - 4000mmf mica
C6 - .1mf 400V.Tub.
C7 - .05mf 400V.Tub.
C8 - .05mf 400V.Tub.
C9 - .1mf 400V.Tub.
C10- 250mmf mica
C11- 250mmf mica
C12- 50mmf mica
C13- 250mmf mica
C14- .01mf 400V.Tub.
C15- .1mf 400V.Tub.
C16- 2000mmf mica
C17- 16mf elec.500V.T.
C18- 8mf elec.500V.T.
C19- 8mf elec.500V.T.
C20- 1500mmf mica. Changed to .01mf mica later
C21- .5mf 400V.Tub.
C22- 100mmf mica
C23- 500mf elec.8V.T.
C24-.01mf mica 1500V.T.
C25-.001+.004mf Tub. 400V.
C26-.01mf 400V.Tub.
C27-.1mf 400V.Tub.
R1 -10K ohms ½W
R2 -.1M ohms ½W
R3 -50K ohms ½W
R4 -33.3 ohms W/W
R5 -50K ohms ½W
R6 -50K ohms ½W
R7 -.1M ohms ½W
R8 -1M ohms ½W
R9 -.5M ohms ½W
R10-.5M ohms ½W
R11- .1M ohms ½W
R12- .5M ohms ½W.
R13- .5M ohms V.C.
R14- 10K ohms ½W.
R15- .1M ohms ½W
R16- .5M ohms ½W.
R17- 50 ohms W/W
R18- .1M ohms ½W.

NOTE - Chassis below Serial Nos.6512 equipped with type 22A valve. Chassis above Serial Nos. 6939 equipped with type 1D4 valve and R17 deleted.

VALVES: 1C4 R.F. 1C6 Convertor. 1C4 I.F. 1B5 det. Power: See Note. I.F. 175 K.C.

VALVE	PLATE VOLTAGE	PLATE CURRENT	OSCILLATOR PLATE VOLTS	SCREEN VOLTAGE	SCREEN CURRENT	BIAS
1C4	140	0.8		32	0.3	0
1C6	140	0.6	65	55	1.75	2
1C4	140	0.8		32	0.3	0
1B5	80	0.4				2
22A	140	6.5		140	1.5	4

CONSUMPTION: Total "B" (No Signal) = 15 m/a. Total "A" = .925 amp. Speaker: PerMag.
All measurements at no signal and to chassis.

AIRZONE 525P & 525M

5-Valve Vibrator Broadcast

(Identical with same Models of previous year)

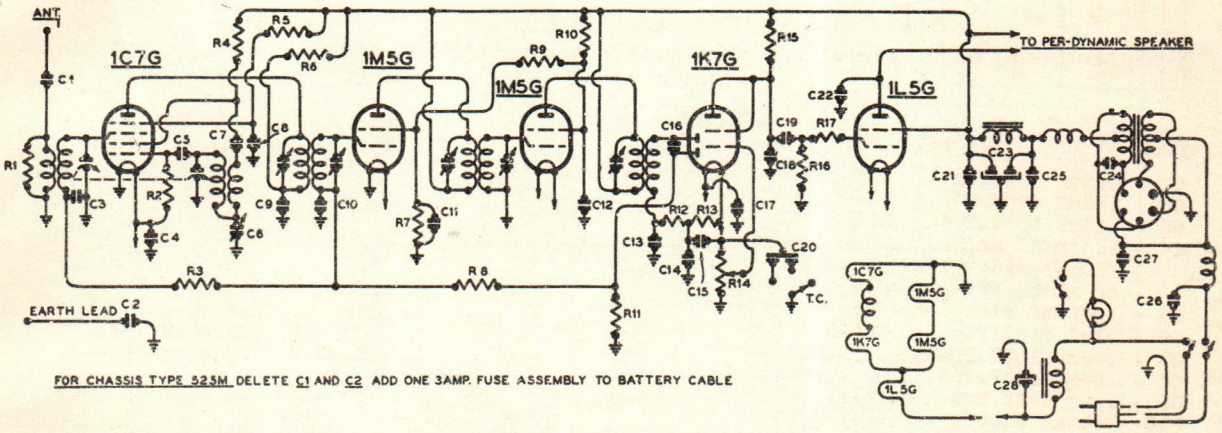
C1 - .01mf 400V.Pap.
C2 - .01mf 400V.Pap.
C3 - .05mf 200V.Pap.
C4 - .05mf 200V.Pap.
C5 - 100mmf mica
C6 - Adj.pad. 5P
C7 - 1000mmf mica
C8 - .05mf 200V.Pap.
C9 - .05mf 200V.Pap.
C10- .05mf 200V.Pap.
C11- .05mf 200V.Pap.
C12- .05mf 200V.Pap.
C13- 100mmf mica
C14- 100mmf mica
C15- .01mf 400V.Pap.
C16- 100mmf mica
C17- .1mf 400V.Pap.
C18- 250mmf mica
C19- .01mf 400V.Pap.
C20- .001+.004mf 400V
C21- .05mf 200V.Pap.
C22- 5000mmf mica
C23- 8+8mf elec. 450V.W.
C24- .02mf 1500V. mica
C25- .01mf mica
C26- 100mmf mica
C27- .5mf 400V. Pap.
C28- 500mf 6V.W. elec.
R1 - 10K ohms ½W.
R2 - 50K ohms ½W.
R3 - .1M ohms ½W.
R4 - 50K ohms ½W.
R5 - 50K ohms ½W.
R6 - 5K ohms ½W.
R7 - 20K ohms ½W.
R8 - 1M ohms ½W.
R9 - 50K ohms ½W.
R10- 50K ohms ½W.
R11- 1M ohms ½W.
R12- 50K ohms ½W.
R13- .5M ohms ½W.
R14- .5M ohms V.C.
R15- .1M ohms ½W.
R16- .5M ohms ½W
R17- 50K ohms ½W.

Models 525P & 525M (Contd.)

VALVES: 1C7G Convertor. 1M5G 1st I.F. 1M5G 2nd I.F. 1K7G det. 1L5G Output.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
1C7G	130	1.5	45	1.8	60	0
1M5G	140	0.2	17	0.1		0
1M5G	140	1.0	65	0.4		2
1K7G	60	0.7				2
1L5G	135	7.5	140	1.5		4

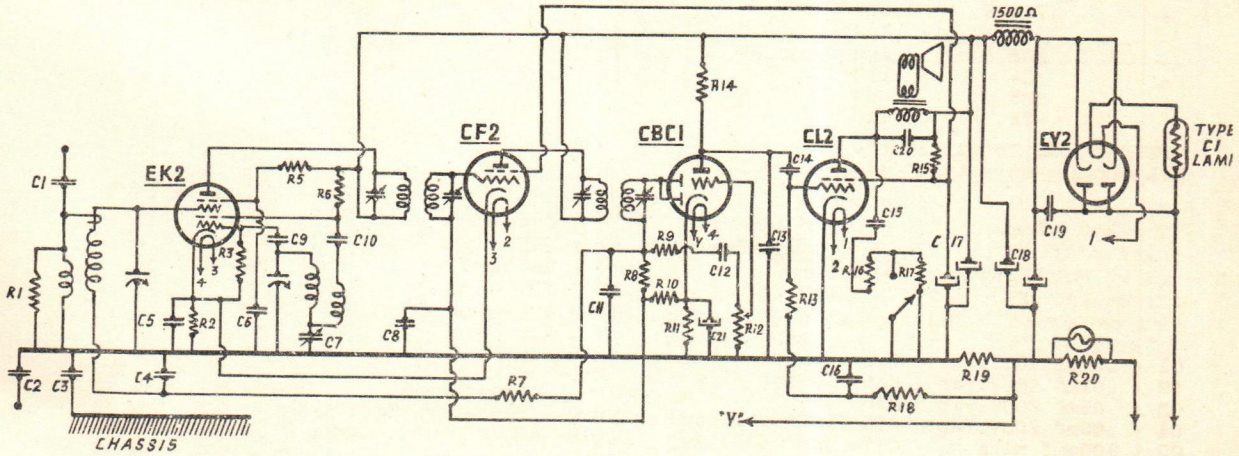
All measurements at no signal and from chassis. I.F.: 456 K.C. Speaker: Permag.
CONSUMPTION: Total "B" (No signal) = 16.5 m/a. Total "A" (No dial light) = 0.9 amp.



FOR CHASSIS TYPE 525M DELETE C1 AND C2 ADD ONE 3AMP. FUSE ASSEMBLY TO BATTERY CABLE

AIRZONE 529

4/5 Broadcast A.C./D.C.



VALVES: EK2 Convertor. CF2 I.F. CBC1 det. and audio. CL2 output. CY2 Rectifier.
C1 Barretter.

I.F. 456 K.C.

Speaker: 1500 ohm field.

C1 - 5000mmf mica	C5 - .25mf pap.400V.	C9 - 100mmf mica	C13- 500mmf mica
C2 - 5000mmf mica	C6 - .1mf pap.400V.	C10- 1000mmf mica	C14- .02mf pap.400V
C3 - .08mf Pap.600V	C7 - Adj.pad.3Plate	C11- 100mmf mica	C15- .05mf pap.400V
C4 - .1mf pap.400V.	C8 - .1mf pap.400V.	C12- .02mf pap.400V.	C16- .25mf pap.400V

MODEL 529 (Contd.)

C17- Dual 8mf 450V.W.
C18- Dual 8mf 450V.W.
C19- 10,000mmf mica
C20- 500mmf mica
C21- 10mf 25V.W.

R1 - 10K ohms ¼W.
R2 - 500 ohms ¼W.
R3 - 50K ohms ¼W.
R5 - 100K ohms ½W.
R6 - 50K ohms ½W.
R7 - 1M ohms ¼W.

R8 - .5M ohms ¼W.
R9 - 50K ohms ¼W.
R10- 100K ohms ¼W
R11- 1K ohms ½W
R12- .5M ohms V.C.
R13- .25M ohms ½W

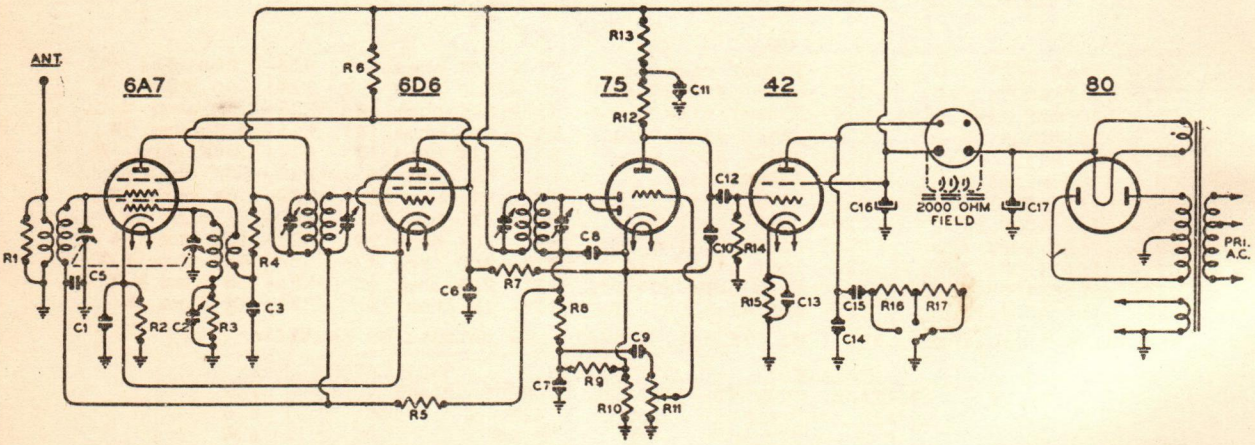
R14- 100K ohms ½W
R15- 15K ohms 1W
R16- 5K ohms ½W
R17- 15K ohms ½W
R18- .25M ohms ½W
R19- 360 ohms W/W
R20- 60 ohms W/W

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
EK2	185	1.1	50	1.1	100	3.2
CF2	185	2.5	90	0.8		3.2
CBC1	48	1.0				1.0
CL2	170	35	90	5.5		16.5

All measurements at no signal and when supply voltage is 240 A.C.

AIRZONE 530

4/5 A.C. Broadcast



C1 - .2mf 400V. Pap.
C2 - Adj. Pad. 5P
C3 - 2000mmf mica
C5 - .1mf 400V.Pap.
C6 - .02mf 400V.Pap.
C7 - 100mmf mica
C8 - 100mmf mica
C9 - .01mf400V.Pap.

C10- 250mmf mica
C11- .25mf 400V.Pap.
C12- .01mf 400V.Pap.
C13- 10mf 25V.Elec.
C14- 5000mmf mica
C15- .05mf 400V.Pap.
C16- 8mf 500V.W.elec
C17- 8mf 500V.W.elec

R1 - 10K ohms ¼W
R2 - 200 ohms ½W
R3 - 20K ohms ½W
R4 - 30K ohms ½W
R5 - 1M ohms ½W
R6 - 10K ohms 1W
R7 - 20K ohms ½W
R8 - 50K ohms ¼W

R9 - 25M ohms ½W
R10- 200 ohms ½W
R11- .5M ohms V.C.
R12- .25M ohms ½W
R13- 50K ohms ½W
R14- .5M ohms ½W
R15- 500 ohms 1W
R16- 5K ohms ½W
R17- 15K ohms ½W

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
6A7	230	6.0	110	4.5	120	4.7
6D6	230	8.0	110	2.0		4.7
75	80	0.4				1.2
42	225	27.0	230	4.7		15.5

Speaker field voltage drop 145 volts. All measurements at no signal.

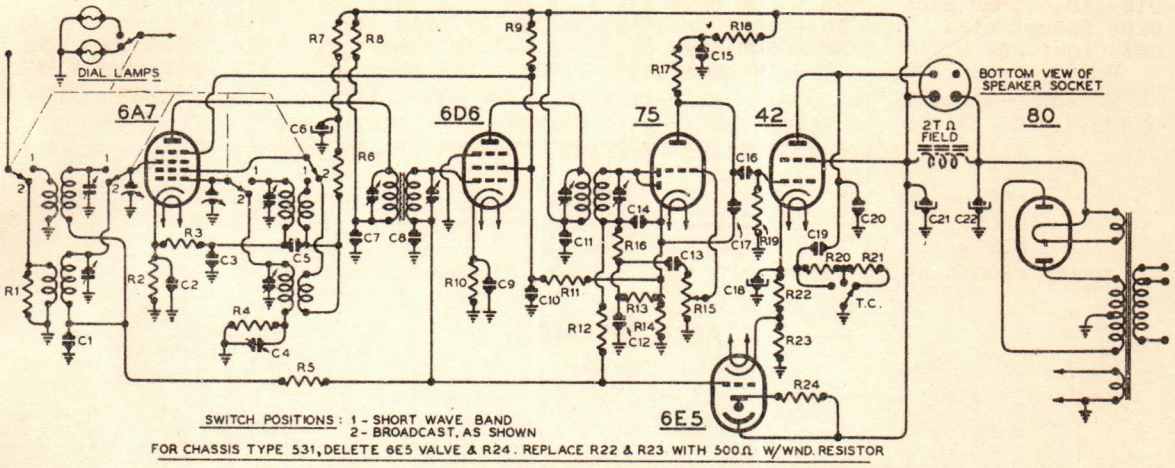
VALVES: 6A7 Convertor. 6D6 I.F. 75 det.& audio. 42 output. 80 Rectifier.

I.F. 456 K.C.

Speaker: 2000 ohm field

AIRZONE 531E

4/5 Dual Wave A.C. with Magic Eye



C1 - .05mf 400V.Pap.
C2 - .1mf 400V. Pap.
C3 - 3100mmf mica plus or minus 1%
C4 - 5P. Adj. Pad.
C5 - 1000mmf mica
C6 - 8mf 500V.P.
C7 - .1mf 400V.Pap.
C8 - .05mf 400V.Pap.
C9 - .1mf 400V. Pap.
C10- .02mf 400V.Pap.
C11- .1mf 400V.Pap.
C12- 100mmf mica
C13- .01mf 400V.Pap.
C14- 250mmf mica
C15- .25mf 400V.Pap.
C16- .01mf 400V.Pap.
C17- 250mmf mica
C18- 10mf elec.25V.W.
C19- .05mf 400V.Pap.
C20- 5000mmf mica
C21- 15mf elec. reg. type 350V cut off
C22- 8mf elec.500V.P.

R1 - 10K ohms ½W
R2 - 300 ohms W/W
R3 - 50K ohms ½W
R4 - 20K ohms ½W
R5 - .1M ohms ½W
R6 - 5K ohms ½W
R7 - 5K ohms ½W
R8 - 4K ohms ½W
R9 - 10K ohms 2W
R10- 400 ohms W/W
R11- 20K ohms ½W
R12- 1M ohms ½W
R13- .25m ohms ½W
R14- 200 ohms W/W
R15- .5M ohms V.C.
R16- 50K ohms ½W
R17- .25M ohms ½W
R18- 50K ohms ½W
R19- .5M ohms ½W
R20- 5K ohms ½W
R21- 15K ohms ½W
R22- 460 ohms W/W
R23- 35 ohms W/W
R24- 1M ohms 1W

VALVES: 6A7 Convertor. 6D6 I.F. 75 det. & audio. 42 output. 80 Rectifier.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTS	BIAS
6A7	210	6.5	105	4.7	165	4.5
6D6	230	7.5	105	2.25		4.4
75	80	0.4				1.1
42	225	26.0	230	4.5		16.0

Speaker field voltage drop 145 volts. All measurements at no signal wave change switch in "S.W." position and in respect to chassis. I.F. 456 K.C. Speaker = 2000 ohm field.

AIRZONE 537

4/5 A.C. Dual Wave

C1 - .05mf 400V.Pap.
C2 - .25mf 400V.Pap.
C3 - 100mmf mica
C4 - 3900mmf mica plus or minus 1%
C5 - 1000mmf mica
C6 - 8mf elec.500V.P.
C7 - .1mf 400V.Pap.
C8 - .05mf 400V.Pap.
C9 - 10mf elec.25V.W.
C10- .05mf 400V.Pap.
C11- .1mf 400V.Pap.
C12- 100mmf mica
C13- 100mmf mica
C14- .01mf 400V.Pap.
C15- .01mf 400V.Pap.
C16- 250mmf mica
C17- 10mf elec.25V.W.
C18- .05mf 400V.Pap.
C19- 5000mmf mica
C20- 16mf elec.500V.P.
C21- 8mf elec.500V.P..
C22- Adj.pad.6P

R1 - 10K ohms ½W
R2 - 200 ohms W/W
R3 - 50K ohms ½W
R4 - .1M ohms ½W
R5 - 5K ohms ½W
R6 - 5K ohms ½W
R8 - 10K ohms 2W
R9 - 20K ohms ½W
R10- 1M ohms ½W
R11- 50K ohms ½W
R12- .25M ohms ½W
R13 -200 ohms W/W
R14- .25M ohms ½W
R15- .5M ohms Vol.Con.
R16- .5M ohms ½W
R17- 5K ohms ½W
R18- 50K ohms ½W
R19- 460 ohms W/W
R20- 5K ohms ½W
R21- 15K ohms ½W

VALVES: 6A8G Convertor. 6U7G I.F. 6B6G det. & audio. 6F6 output. 5Y3 Rectifier.

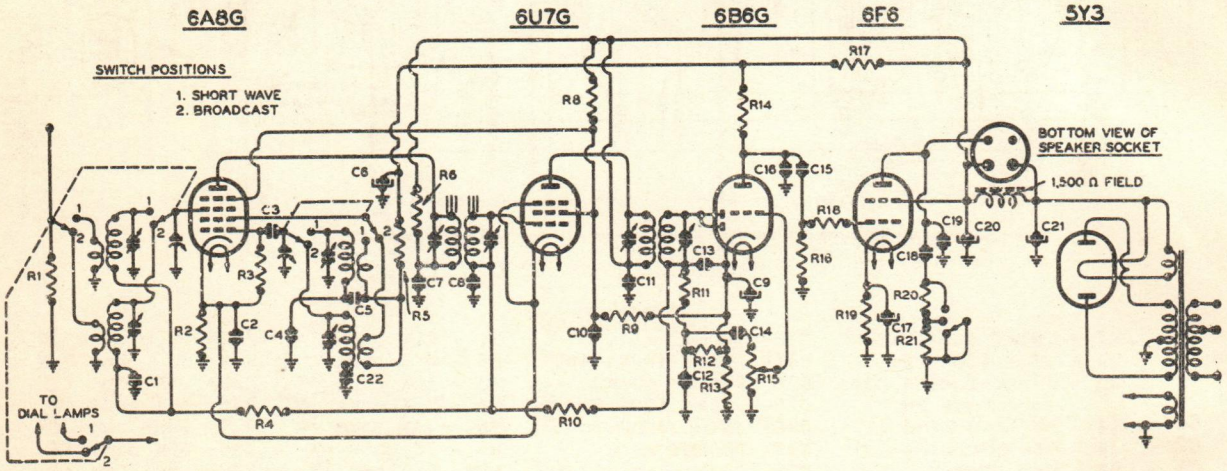
MODEL 537 (Contd.)

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSC. VOLTAGE	OSC. CURRENT	BIAS
6A8G	185	5.0	95	4.0	150	7.0	4.1
6U7G	210	6.0	95	3.0			4.1
6B6G	85	.4					1.1
6F6G	205	25	210	5.0			13.5
5Y3	output 300 volts						

Speaker: 1500 ohm field

Speaker field voltage drop 90 volts.

All measurements to be taken with switch in Short Wave position and no signal and in respect to chassis.



AIRZONE 539

5-Valve Dual Wave Vibrator

C1 - .05mf 200V.Pap.
C2 - .1mf 200V.Pap.
C3 - 100mmf mica
C4 - 1000mmf mica
C5 - 3900mmf mica plus or minus 1%
C6 - Adj.Pad.6Plate
C7 - .05mf 200V.Pap.
C8 - 8mf elec.500P.V.
C9 - .05mf 200V.Pap.
C10- .05mf 200V.Pap.
C11- .05mf 200V.Pap.
C12- .05mf 200V.Pap.
C13- .1mf 400V.Pap.
C14- 10mf elec.40P.V.
C15- 100mmf mica
C16- 100mmf mica
C17- 100mmf mica
C18- .01mf 400V.Pap.
C19- 1000mmf mica
C20- .1mf 400V.Pap.
C21- 250mmf mica
C22- .01mf 400V.Pap.
C23- 2000mmf mica
C24- .1mf 400V.Pap.
C25- 8mf elec.500P.V.
C26- 8mf elec.500P.V.
C27- .02mf mica
C28- .01mf mica
C29- .25mf 200V.Pap.
C30- .25mf 200V.Pap.
C31- 500mf elec.8P.V.

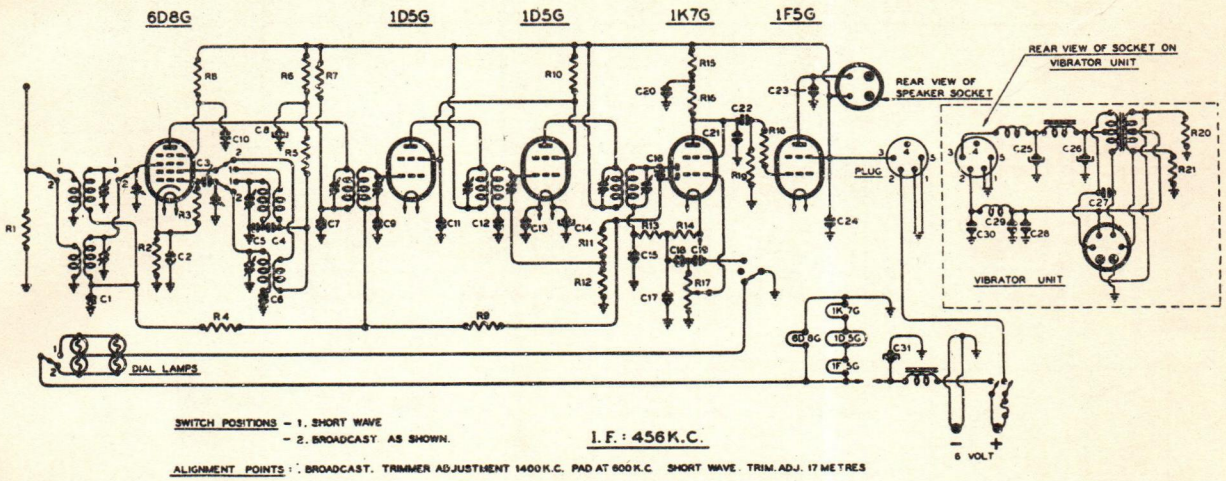
R1 - 10K ohms ¼W
R2 - 540 ohms W/W
R3 - 50K ohms ½W
R4 - .1M ohms ¼W
R5 - 10K ohms ½W
R6 - 5K ohms ½W
R7 - 5K ohms ½W
R8 - 30K ohms ¼W
R9 - 1M ohms ¼W
R10- .25M ohms ½W
R11- .5M ohms ¼W
R12- .5M ohms ¼W
R13- .1M ohms ¼W
R14- .5M ohms ½W
R15- 10K ohms ½W
R16- .1M ohms ½W
R17- .5M ohms V.C.
R18- 50K ohms ¼W
R19- .5M ohms ½W
R20 - 200 ohms ½W
R21- 200 ohms ½W

VALVES: 6D8G Convertor. 1D5G I.F. 1D5G 2nd I.F. 1K7G det. & audio. 1F5G output. I.F. 456 K.C. Speaker: Permag.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR VOLTAGE	OSCILLATOR CURRENT	BIAS
6D8G	125	1.0	60	2.5	85	3.0	-3.8
1D5G	135	0.7	35	0.2			-2.0
1D5G	135	0.7	35	0.2			-2.0
1K7G	35	0.8					0
1F5G	130	7.5	135	2.5			-4.0

All measurements to be taken with switch in Short Wave position and no signal, and in respect to chassis. CONSUMPTION: Total "B" (No signal) = 19 m/a. Total battery without pilot lights = 1.1 amp.

NOTE: Bias measurements for any valve, with the exception of 6D8G, are taken between that valve's negative filament and the point on the series filament system to which its own grid return is connected.



AIRZONE 609E

5/6 Dual Wave A.C. (and Magic Eye)

C1 - .05mf 400V.Pap.
C2 - .1mf 400V.Pap.
C3 - .1mf 400V.Pap.
C4 - .1mf 400V.Pap.
C5 - .05mf 400V.Pap.
C6 - .1mf 400V.Pap.
C7 - .1mf 400V.Pap.
C8 - 50mmf mica
C9 - 3900mmf mica plus or minus 1%
C10- 300mmf mica plus or minus 3%
C11- Adj.Pad.3Plate
C12- 500mmf mica
C13- .1mf 400V.Pap.
C14- .05mf 400V.Pap.
C15- .1mf 400V.Pap.
C16- 100mmf mica
C17- 100mmf mica
C18- .01mf 400V.Pap.
C19- 10mf elec.40V.P.
C20- 250mmf mica
C21- .25mf 400V.Pap.
C22- .01mf 400V.Pap.
C23- 8mf elec.500V.P.
C24 - 10mf elec.40V.P.
C25- 5000mmf mica
C26 -.05mf 400V.Pap.
C27- 15mf elec.reg. type 350V cut off
C28- 8mf elec.500V.P.

R1 - 10K ohms ½W
R2 - 400 ohms W/W
R3 - 30K ohms ½W
R4 - .1M ohms ½W
R5 - 400 ohms W/W
R6 - 500 ohms ½W
R7 - 5K ohms ½W
R8 - .1M ohms ½W
R9 - 30K ohms ½W
R10- 10K ohms ½W
R11- .1M ohms ½W
R12- 5K ohms ½W
R13 - 400 ohms W/W
R27 -50K ohms ½W
R14- 20K ohms 1W
R15- 1M ohms ¼W
R16- 50K ohms ¼W
R17- .25M ohms ½W
R18- 4K ohms ½W
R19- 50K ohms ½W
R20- .25M ohms ½W
R21- .5M ohms V.C.
R22- .5M ohms ½W
R23- 5K ohms 1W
R24- 460 ohms W/W
R25- 35 ohms W/W
R26 - 5K ohms ½W
R28- 1M ohms 1W

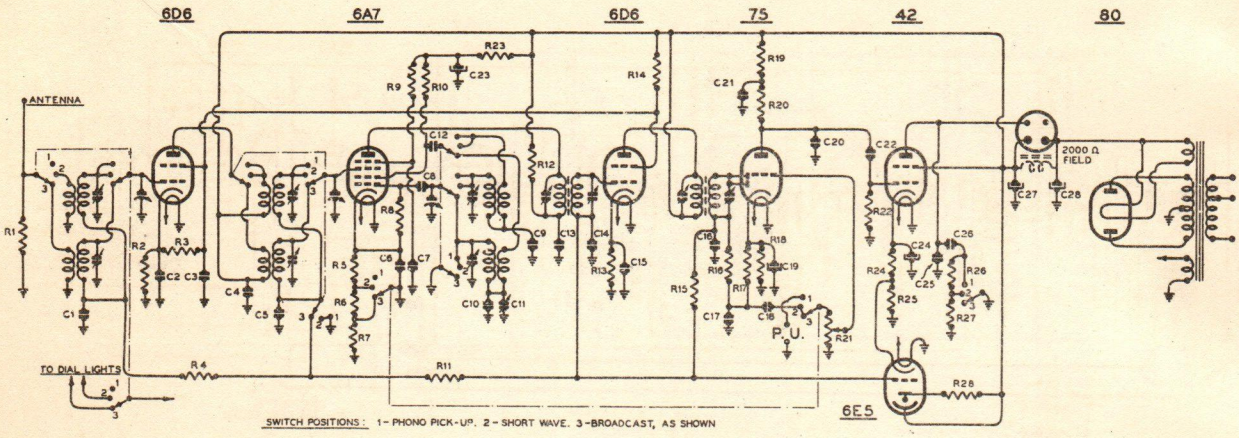
VALVES: 6D6 R.F. 6A7 Convertor. 6D6 I.F. 75 det. & audio. 42 Output. 80 Rectifier.
I.F. 456 K.C. Speaker: 2000 ohm field.

VOLTAGE AND CURRENT TABLE.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTAGE	BIAS
6D6	230	6.5	100	1.6		4.8
6A7	215	2.75	90	3.3	135	4.5
6D6	230	7.8	100	1.8		4.0
75	75	0.35				1.1
42	225	27.0	230	4.5		15.0
80	Output	380 volts				
6E5	target volts	230 - target current 1.2 m/a				

All measurements at no signal and wave change switch in short wave position

N.B. On BROADCAST BAND additional bias is applied to 6A7 and the following potentials appl S.G. 100V. - Osc. plate 155V.



AIRZONE 612

6-Valve Dual Wave Battery Operated

C1 - .05mf 400V.Pap.
C2 - .1mf 400V.Pap.
C3 - .1mf 400V.Pap.
C4 - 8mf elec.500V.P.
C5 - .05mf 400V.Pap.
C6 - .1mf 400V.Pap.
C7 - 100mmf mica
C8 - .0039mf mica plus or minus 1%
C9 - 300mmf mica plus or minus 3%
C10- Adj.pad.3 Plate
C11- .001mf mica
C12- .25mf 400V.Pap.
C13- .05mf 400V.Pap.
C14- .05mf 400V.Pap.
C15- .1mf 400V.Pap.
C16- .05mf 400V.Pap.
C17- 250mmf mica
C18- .005mf mica
C19- 100mmf mica
C20- .01mf 400V.Pap.
C21- 250mmf mica
C22- .002mf mica
C23- 250mmf mica
C24- .1mf 400V.Pap.
C25- 25mf elec.25V.P.
C26- .002mf mica
R1 - 10K ohms ½W
R2 - 30K ohms ½W
R3 - 50K ohms ½W
R4 - .1M ohms ½W
R5 - 10K ohms ½W
R6 - 10K ohms ½W
R7 - 5K ohms ½W
R8 - .1M ohms ½W
R9 - 30K ohms ½W
R10- 50K ohms ½W
R11- 1M ohms ½W
R12- .1M ohms ½W
R13- .5M ohms ½W
R14- .5M ohms ½W
R15- .1M ohms ½W
R16- .5M ohms ½W
R17- .5M ohms V.C.
R19- 180 ohms W/W
R20- 130 ohms W/W
R21- .5M ohms ½W
R22- 50K ohms ½W
R23- 1M ohms ½W
R24- .25M ohms ½W

VALVES: 1D5G R.F. 1C7G Convertor. 1D5G 1st I.F. 1D5G 2nd I.F. 1K7G det. 1F5G output.
I.F. 456 K.C. Speaker: Permag.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTAGE	BIAS
1D5G	130	1.5	55	0.45		3.4
1C7G	125	1.2	55	2.0	65	3.4
1D5G	130	0.35	35	0.1		3.4
1D5G	130	0.35	35	0.1		3.4
1K7G	40	0.3	20	0.1		0
1F5G	127	6.0	130	2.5		5.7

All measurements with switch in short wave position and at no signal.

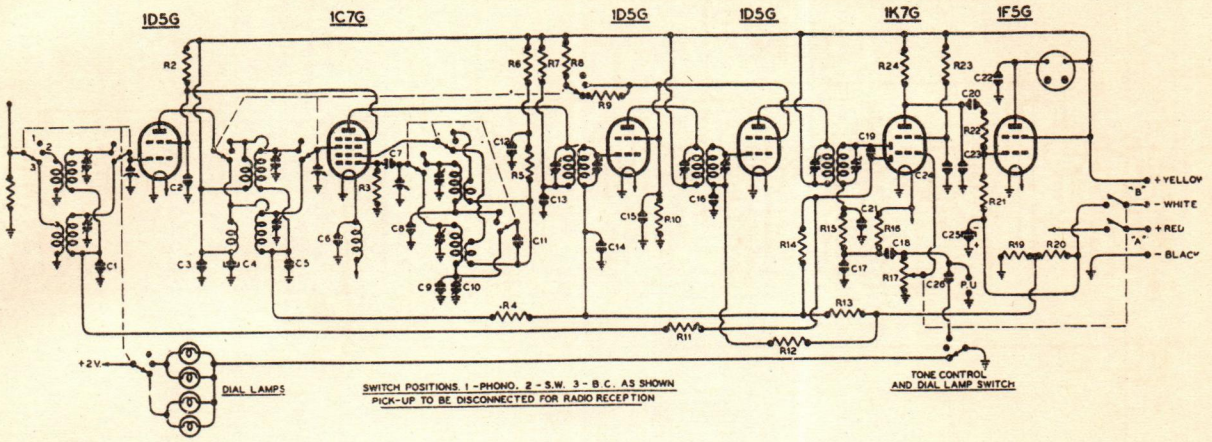
CONSUMPTION:

Total "B" (no signal) Short Wave = 18 m/a
Broadcast = 17 m/a
" "A" (no dial light) = .54 amp.

BATTERY LEADS:

Red = A+
Black = A-
Yellow = B+
White = B-

MODEL 612 (Contd.)



AIRZONE 613

6-Valve Dual Wave Vibrator Powered

C1 - .05mf 400V.Pap.
C2 - .05mf 400V.Pap.
C3 - .1mf 400V.Pap.
C4 - .1mf 400V.Pap.
C5 - .05mf 400V.Pap.
C6 - .05mf 400V.Pap.
C7 - .1mf 400V.Pap.
C8 - 100mmf mica
C9 - 3900mmf mica plus or minus 1%
C10- 1000mmf mica
C11- 300mmf mica plus or minus 3%
C12- Adj. pad 3Plate
C13- 8mf elec.500V.P.
C14- .05mf 400V.Pap.
C15- .05mf 400V.Pap.
C16- .05mf 400V.Pap.
C17- .1mf 400V.Pap.
C19- 250mmf mica
C20- 250mmf mica
C21- 100mmf mica
C22- 5000mmf mica
C23- .1mf 400V.Pap.
C24- 2000mmf mica
C25- .1mf 400V.Pap.
C26- 250mmf mica
C27- .01mf 400V.Pap.
C28- 100mf elec. 8V.P.
C29- 2000mmf mica
C30- 8mf elec.500V.P.
C31- 8mf elec.500V.P.
C32- 8mf elec.500V.P.
C33- .02mf mica 1500V.T.
C34- .01mf mica
C35- .5mf 400V.Pap.
C36- 100mmf mica
C37- 2000mmf mica
C38- 500mf elec.8V.P.

R1 - 10K ohms ½W
R2 - .1M ohms ½W
R3 - 50K ohms ½W
R4 - .25M ohms ½W
R5 - .25M ohms ½W
R6 - .1M ohms ½W
R7 - 10K ohms ½W
R8 - 10K ohms ½W
R9 - 5K ohms ½W
R10- 1M ohms ½W
R11- 30K ohms ½W
R12- .5M ohms ½W
R13- .5M ohms ½W
R14- .1M ohms ½W
R15- .5M ohms ½W
R16- 10K ohms ½W
R17- .25M ohms ½W
R18- .5M ohms V.C.
R19- 1M ohms ½W
R20- 50K ohms ½W
R21- .5M ohms ½W
R22- 16.5 ohms W/W
R23- 33 ohms W/W

VALVES: 1D5G R.F. 1C7G Convertor. 1D5G 1st I.F. 1D5G 2nd I.F. 1K7G det. 1F5G output.
I.F. 456 K.C. Speaker: Permag.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR PLATE VOLTAGE	BIAS
1D5G	135	2.0	60	0.6		2.0
1C7G	128	1.2	50	1.5	65	2.0
1D5G	135	0.3	30	0.07		2.0
1D5G	135	0.3	30	0.07		2.0
1K7G	40	0.3	20	0.1		0
1F5G	130	8.0	135	2.5		4

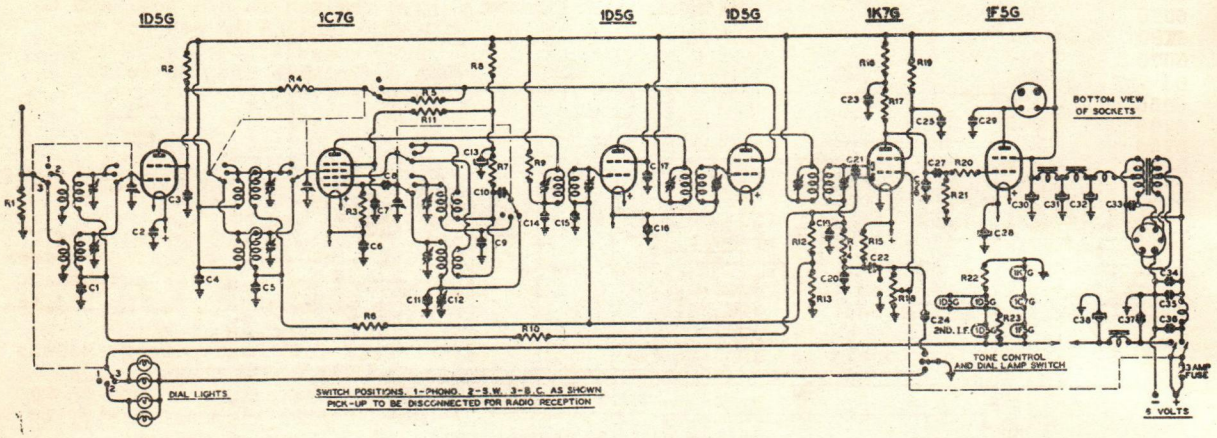
All measurements with switch in Short Wave position and no signal and with respect to chassis.

NOTE: Bias measurements for any valve are taken between that valve's negative filament and the point on the series filament system to which its own grid return is connected.

CONSUMPTION: Total "B" (no signal): Short Wave = 19 M/A
Broadcast = 18 M/A

Total "A" (no dial light) = 1 amp.

AIRZONE 613 (Contd.)

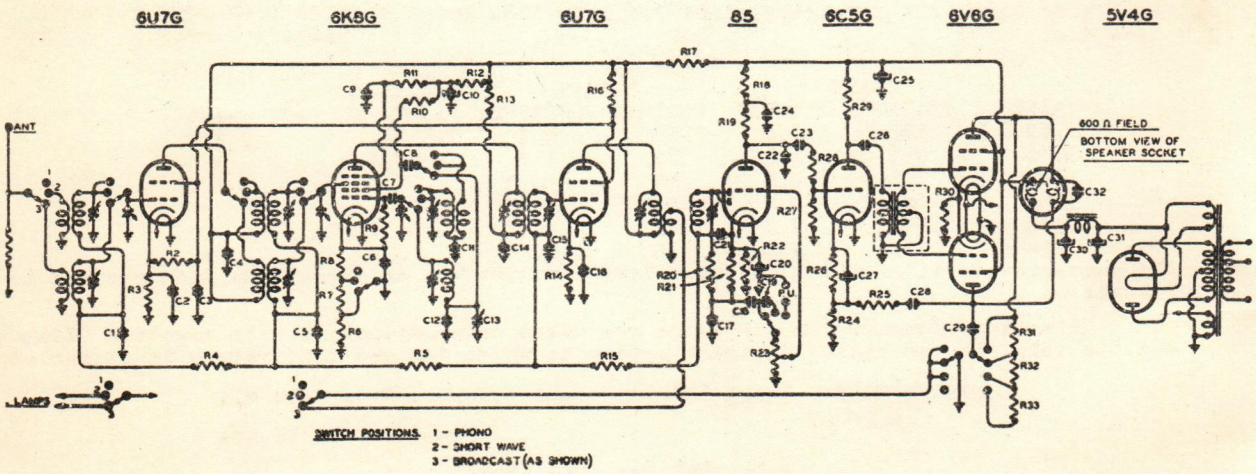


AIRZONE 804B

7/8 Dual Wave A.C. Operated

C1 - .05mf 400V.Pap.
C2 - .1mf 400V.Pap.
C3 - .1mf 400V.Pap.
C4 - .1mf 400V.Pap.
C5 - .05mf 400V.Pap.
C6 - .1mf 400V.Pap.
C7 - 50mmf mica
C8 - 500mmf mica
C9 - .1mf 400V.Pap.
C10- 8mf 500V.P.
C11- 3900mmf mica plus or minus 1%
C12- 300mmf mica plus or minus 3%
C13- Adj.Pad. 3 Plate
C14- .1mf 400V.Pap.
C15- .05mf 400V.Pap.
C16- .1mf 400V.Pap.
C17- 100mmf mica
C18- .01mf 400V.Pap.
C19- .001mf 400V.Pap.
C20- 10mf elec.40P.V.
C21- 100mmf mica
C22- 250mmf mica
C23- .01mf 400V.Pap.
C24- .5mf 400V.Pap.
C25- 16mf elec.reg. type 350V cut off
C26- .5mf 400V.Pap.
C27- 10mf elec.40P.V.
C28- .02mf 400V.Pap.
C29- .05mf 400V.Pap.
C30- 8mf elec.500V.P.
C31- 8mf elec.500V.P.
C32- 2000mmf mica
R1 - 10K ohms ¼W
R2 - 30K ohms ½W
R3 - 1K ohms W/W
R4 - .1M ohms ½W
R5 - .1M ohms ½W
R6 - 5K ohms ½W
R7 - 500 ohms ½W
R8 - 540 ohms W/W
R9 - 50K ohms ½W
R10- 10K ohms ½W
R11- 10K ohms ½W
R12- 5K ohms 1W
R13- 5K ohms ½W
R14- 1K ohms W/W
R15- 1M ohms ½W
R16- 20K ohms 1W
R17- 1500 ohms 2W
R18- 20K ohms ½W
R19- 50K ohms ½W
R20- 50K ohms ½W
R21- .25M ohms ½W
R22- 4K ohms ½W
R23- .5M ohms V.C.
R24- 100 ohms W/W
R25- 30K ohms 1W
R26- 4K ohms ½W
R27- .25M ohms ½W
R28- .25M ohms ½W
R29- 50K ohms ½W
R30- 250 ohms W/W
R31- 5K ohms ½W
R32- 15K ohms ½W
R33- 5K ohms ½W

VALVES: 6U7G R.F. 6K8G Convertor. 6U7G I.F. 85 det. 6C5G driver. 6V6G/6V6G push-pull output. 5V4G rectifier. I.F. 456 K.C. Speaker field: 600 ohm.



MODEL 804B (Contd.)

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	SCREEN CURRENT	OSCILLATOR VOLTAGE	OSCILLATOR CURRENT	BIAS
6U7G	240	5.4	90	1.8			10.0
6K8G	210	4.0	112	5.5	120	5.3	8.8
6U7G	240	6.5	90	2.2			9.7
83	105	2.1					8.0
6C5G	170	1.9					7.4
6V6G	285	35.0	290	2.5			18.0
6V6G	285	35.0	290	2.5			18.0
5V4G	375	volts output					

All measurements to be taken with Wave Change switch in S/W pos. and no signal & in respect to chassis.
Voltage drop 80 volts.

AIRZONE SERVICE DATA.

Alignment Frequencies: B'cast 1400 and 600 Kcs. S.W. 18.8 metres.
RE-ALIGNMENT: Connection of test oscillator to valve grids for I.F. alignment must be made through a condenser (0.01-0.1mfd.), with a resistor of 0.1-0.5 meg. connected between cap of valve and the grid clip removed from it. During alignment the receiver output (across speaker input) must be kept below 30 volts with volume control full on, by adjustment of test osc. output control.
I.F. Transformer Frequency: 456 and 175 Kcs. (See Models). Field Coil Resistances: Models 40,50,51 and 60:- 1,500 ohms. Models 70,70A,73,80A,80B,90 and 94: 2,000 ohms.
Power Supply: Mullard receivers provide for two ranges of mains voltages from 200 to 230 and 230 to 250 volts. Tappings are provided at the power transformer terminal strip to cover these ranges, and are colour coded as follows:- 200 to 230 Black & Yellow.
230 to 250 Black & Red.

ABBREVIATIONS.

RESISTORS.

K	equals	a thousand in resistor table
w/w & P	"	wire wound in resistor table
W	"	Watt in resistor table
M	"	Meg in resistor table
V.C.	"	Volume Control in resistor table.

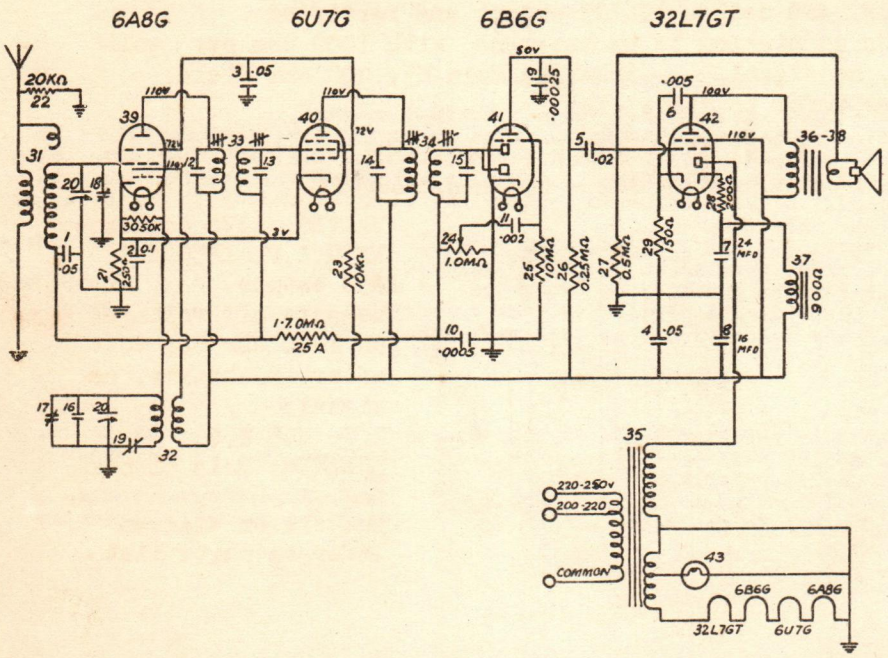
CONDENSERS.

Tub.	equals	Tubular in condenser table.
V.P.	"	Voltage Peak in condenser table
Pap.	"	Paper in condenser table
HF	"	High Frequency in condenser table.

ASTOR RADIO

ASTOR "MICKEY MOUSE" B.P.

4-Valve Broadcast A.C. Operated Midget



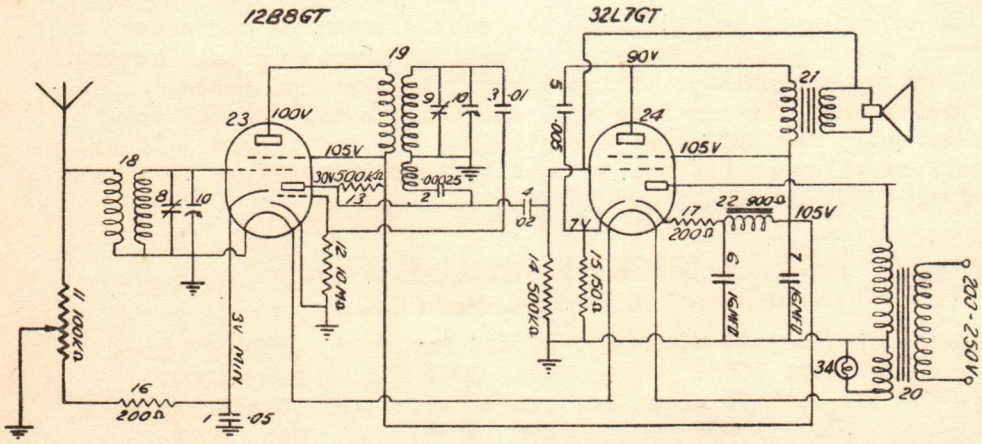
1. .05mfd.Pap.Con.200V
2. .1mfd Pap.Con.200V
3. .05mfd Pap.Con.400V
4. .05mfd Pap.Con.400V
5. .02mfd Pap.Con.400V
6. .005mfdPap.Con.600V
7. 24mfd elec.Con. ET1043 350VP
8. 16mfd Elec. Con. ET1049 350VP
9. .00025mf Mica Con. 1000V
10. .0005mf Mica Con. 1000V
11. .002mf Pap.Con.1000V
12. .0001mfd Mica Con. 1000V
13. .00005mfd Mica Con. 1000V
14. .0001mfd. Mica Con. 1000V
15. .0001mfd Mica Con. 1000V
16. 25mmf W/W Con.
21. 250 ohm Carbon Res. ¼ Watt
22. 20,000 ohm Carbon Res. ½ Watt

23. 10,000 ohm Carbon Res. ½W
24. 1meg. Volume Control
25. 10meg. Carbon Res. 1 Watt
26. 250,000 ohm Carbon Res. ½Watt
27. 500,000 ohm Carbon Res. ½W
28. 200 ohm W/W Res. 3 Watt
29. 150 ohm Carbon Res. ½ Watt
30. 50,000 ohm Carbon Res. ½W

VALVES: 6A8G Converter. 6U7G I.F. 6B6G det. 32L7GT Rectifier and output. All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal. Numbers refer to parts list. Speaker: 900 ohm field. I.F. 455 K.C.
Frequency coverage 1650K.C. to 540 K.C.

ASTOR A.R. BABY

2-Valve A.C. Operated Midget Receiver



1. .05mf Pap.Con. 200V.
2. .00025mfd Mica Con. 1000V
3. .01mfd Pap.Con. 400V
4. .02mfd Pap.Con. 400V.
5. .005mfd Pap.Con. 600V
6. 16mfd elec.Con. Type EEC916 350VP
7. 16mfd elec.Con. Type ET1043 350VP
11. 100,000 ohm Vol. Control

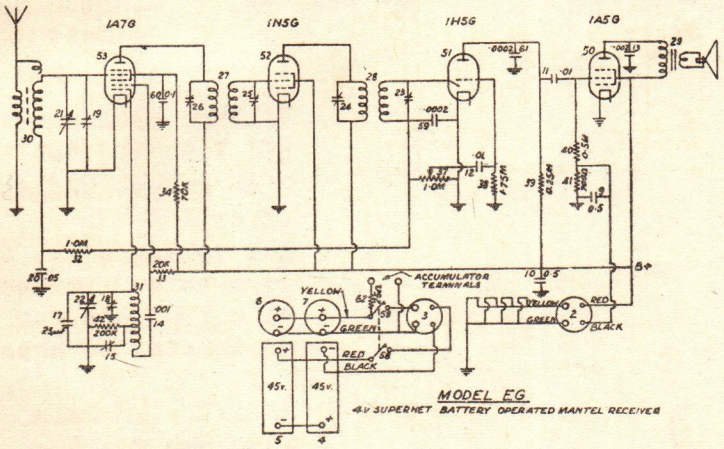
ASTOR A.R. BABY

12. 10meg. Res.1W
13. 500,000 ohm Res.½W
14. 500,000 ohm Res. ½W
15. 150 ohmRes.½W
16. 200 ohmRes.½W
17. 200ohm W/W Res. 3W

VALVES: 12B8GT R.F. and det. - 32L7GT output and rectifier.
All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal. SPEAKER: Rola K5, 900 ohm field.
Numbers on diagram refer to parts list.

ASTOR MICKEY MOUSE

4-Valve Broadcast Battery Operated, Model EG



VALVES: 1A7G converter
1N5G I.F. 1H5G det.
1A5G output.
Measure all voltages on 1000 ohm per volt meter to chassis, no signal.
I.F. 455 K.C.
SPEAKER: Rola 56 permag.
Numbers on diagram refer to parts list.

9. .5mfd Pap.Con. 200V
10..5mfd Pap.Con. 200V
11. .01mfd Pap.Con 400V
12..01mfd Pap.Con. 400V
13..002mfd Pap. Con.400V
14. .001mfd Mica Con.1000V
17. 25mmfd W/W Con. 1000V
20. .05mfd Pap. Con.200V
32. 1meg.Res.¼W
33. 20,000 ohmRes.¼W
34. 70,000 ohm Res. ¼W
37. 1meg.Vol. Control
38. 1.75 meg. Res.¼W
39. 250,000 ohmRes.¼W
40. 500,000 ohmRes.¼W
41. 700 ohm Res. ¼W
42. 200,000 ohm Res. ¼W
59. .0002mfd Mica Con.1000V
60. .1mfd Pap. Con. 200V
61. .0002mfd Mica Con.1000V
62. 2.5 ohms W/W Res. 2 Watt

CAUTION: If an accumulator is used. The set should never be connected to any other but a two volt accumulator. A battery charger should never be connected. to the accumulator whilst the set is also connected. Failure to observe these precautions will shorten the life of the valves, and consequently the efficient operation of the set itself. If external air cell or filament battery is used be sure the voltage DOES NOT EXCEED 1½ volts.

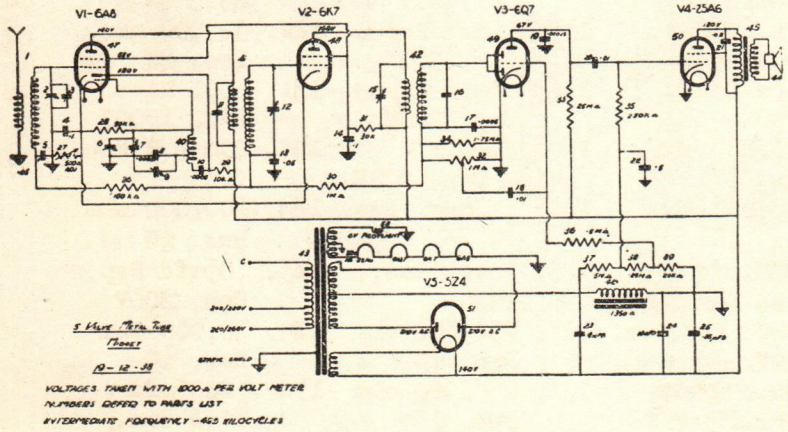
ASTOR MICKEY MOUSE

5-Valve Broadcast A.C. Operated, Model E.C.

4. .1mf Pap.Con. 400V
5. .05mf Pap. Con. 200V
8. .0003mfd Mica Con. 1000V
10..0005mfd Mica Con. 1000V
13. .05mfd Pap. Con. 200V
14. .1mfd Pap. Cor 400V
17. .0005mfd Mica Con. 1000V
18. .01mfd Pap. Con. 400V

ASTOR MICKEY MOUSE MODEL E.C. (Contd.)

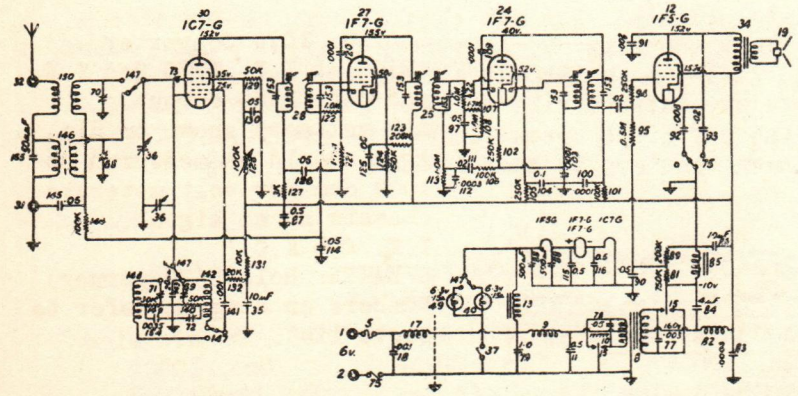
19. .00025mfd Mica Con. 1000V
20. .01mfd Pap. Con. 400V
21. .02mfd Pap. Con. 400V
22. .5mfd Pap. Con. 200V
23. 4mfd Elec. Con. 300V
24. 10mfd Elec. Con. 300V
25. .25mfd Pap. Con. 400V
26. 100,000 ohm Res. ½ Watt
27. 500 ohm Adj. W.W. Resistor
28. 50,000 ohm Carbon Res. ¼ Watt
29. 10,000 ohm Carbon Res. ¼ Watt
30. 1meg. Carbon Res. ¼W
31. 30,000 ohm Car. Res. ¼W
32. 1meg. Centralab Volume Control
33. .25meg. Carbon Res. ¼W
34. 1.75meg. Carbon Res. ¼W
35. 250,000 ohm Carbon Res. ¼ Watt
36. .5meg. Carbon Res. ¼W
37. .5meg. Carbon Res. ¼W
38. .25meg. Carbon Res. ¼W
39. 20,000 ohm Carbon Res. ¼ Watt



VALVES: 6A8 converter 6K7 I.F. 6Q7 det. 25A6 output 5Z4 rectifier.
All voltages on diagram to be measured with 1000 ohm per volt meter to chassis.
I.F. 455 K.C.
SPEAKER: F4 Rola. 1350 ohm field.
Numbers on diagram refer to parts list.

ASTOR "ALLADDIN" MODEL F.H.

4-Valve Dual Wave Vibrator Receiver with Presto Tuning



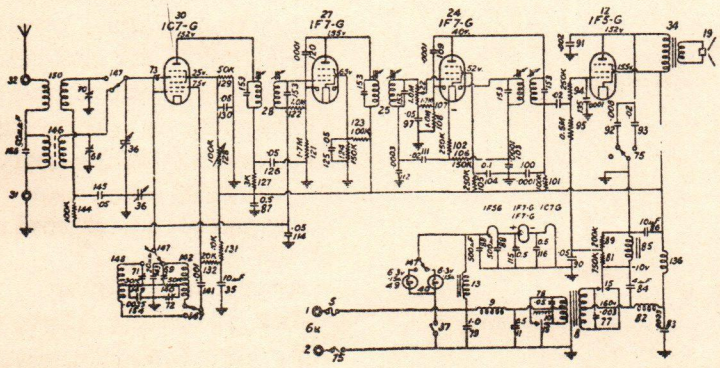
VALVES: 1C7G Converter. 1F7G I.F. 1F7G 2nd I.F. and det. 1F5G output.
All voltages shown on diagram to be measured on 1000 ohm per volt meter to chassis at no signal.
Numbers on diagram refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola 66 Permag.

18. .001mfd Mica Con. 1000V
22. Volume Cont. 1meg. Logarithmic
35. 10mfd. Dry elec. Con. 300V
77. .003mfd Mica Con. 2000V
78. .05mfd Pap. Con. 400V
79. 1mfd Pap. Con. 200V
81. 750,000 ohm Res. ¼W
83. .0003mfd Mica Con. 1000V
84. 4mfd.Elec. Con. 300V
85. 500 ohm Filter Choke
86. 10mfd Elec. Con. 200V
87. .5mfd Pap. Con. 400V
88. Twin 500mfd Elec.Con.6V
89. 200,000 ohm Res. ¼W
90. .05mfd Pap. Con. 200V
91. .002mfd Pap. Con. 600V
92. .008mfd Pap. Con. 600V
93. .02mfd Pap. Con. 600V
94. 250,000 ohm Res. ¼W
95. 500,000 ohm Res. ¼W
96. .02mfd Pap. Con. 400V
97. .05mfd Pap. Con. 400V
100. .0001mfd Mica Con. 1000V
101. 100,000 ohm Res. ¼W
102. 250,000 ohm Res. ¼W
103. .0001mfd Mica Con.1000V
104. .1mfd Pap.Con. 400V
105. 250,000 ohm Res. ¼W
106. 100,000 ohm Res. ¼W
107. 1.7meg. Res. ¼W
108. 1meg. Res. ¼W
109. .0001 Mica Con. 1000V
111. .02mfd Pap. Con. 400V
112. .0003mfd Mica Con. 1000V
113. 1.75meg.Res. ¼W
114. .05mfd Pap. Con.400V
115. .5mfd Pap. Con. 200V
116. .5mfd Pap. Con. 200V
120. .0001mfd Mica Con.1000V
121. 1.7meg. Res. ¼W
122. 1meg. Res. ¼W
123. 200,000 ohm Res. ¼W
124. 150,000 ohm Res. ¼W
125. .05mfd Pap. Con. 400V
126. .05mfd Pap. Con. 600V
127. 3,000 ohm Res. ¼W
128. 100,000 ohm Res. (Adjustable)1W
129. 50,000 ohm Res. ¼W
130. .05mfd Pap. Con. 400V
131. 10,000 ohm Res. ¼W
132. 20,000 ohm Res. ¼W
140. 50,000 ohm Res. ¼W
141. .001 Mica Con. 1000V
143. 20mfd W/W Con.
144. 100,000 ohm Res. ¼W
145. .05mfd Pap. Con. 200V
149. 30,000 ohm Res. ¼W
154. .0035mfd Mica Con. 1000V
155. 50mmfd W/W Con.

ASTOR 956

4-Valve Dual Wave Vibrator Powered Receiver

(Telephone dial tuning)

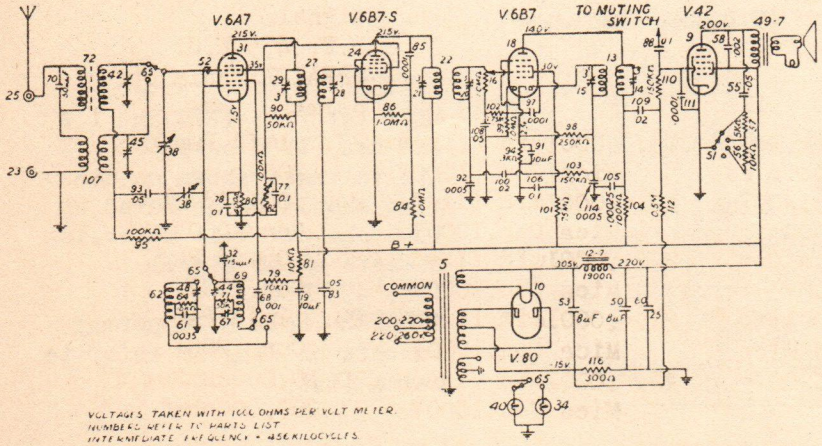


VALVES: 1C7G Converter. 1F7G 1st I.F. 1F7G 2nd I.F. and det. 1F5G output.
All voltages shown on diagram should be measured on 1000 ohm per volt meter, to chassis at no signal.
I.F. 455 K.C.
SPEAKER: Rola 8/20 permag.
Numbers on diagram refer to parts list.

11. .5mfd Metal Clad Generator Con.200V
35. 10mfd Dry elec.Con.300V
77. .003mfd Mica Con.2000V
78. .05mfd Pap. Con. 400V
79. 1mfd Pap. Con. 200V
81. 750,000 ohm Res. ¼W
83. .0003mfd Mica Con.1000V
84. 4mfd elec. Con.300V
85. 500 ohm Filter Choke
86. 10mfd Elec. Con. 300V
87. .5mfd Pap. Con. 400V
88. Twin 500mfd. Elec.Con.6V
89. 200,000 ohm Res. ¼W
90. .05mfd Pap. Con. 200V
91. .002mfd Pap. Con. 600V
92. .008mfd Pap. Con. 600V
93. .02mfd Pap. Con. 600V
94. 250,000 ohm Res. ¼W
95. 500,000 ohm Res. ¼W
96. .02mfd Pap. Con. 400V
97. .05mfd Pap. Con. 400V
100. .0001mfd Mica Con.1000V
101. 100,000 ohm Res. ¼W
102. 250,000 ohm Res. ¼W
103. .0001mfd Mica Con. 1000V
104. .1mfd Pap. Con. 400V
105. 250,000 ohm Res. ¼W
106. 150,000 ohm Res. ¼W
107. 1.7meg.Res¼W
108. 1meg.Res.¼W
109. .0001 Mica Con.1000V
111. .02mfd Pap Con.400V
112. .0003mfd Mica Con. 1000V
114. .05mfd Pap. Con.400V
115. .5mfd Pap. Con. 200V
116. .5mfd Pap. Con.200V
120. .0001mfd Mica Con.1000V
121. 1.7meg.Res. ¼W
122. 1meg.Res.¼W
123. 100,000 ohm Res. ¼W
124. 150,000 ohm Res. ¼W
125. .05mfd Pap. Con. 400V
126. .05mfd Pap. Con. 600V
127. 3,000 ohm Res. ¼W
128. 100,000 ohm Res. (Adjustable) 1W
129. 50,000 ohm Res. ¼W
130. .05mfd Pap. Con. 400V
131. 10,000 ohm Res. ¼W
132. 20,000 ohm Res. ¼W
135. .0001mfd Mica Con. 1000V
140. 50,000 ohm Res. 1W
141. .001 Mica Con. 1000V
143. 20mmfd W/W Con.
144. 100,000 ohm Res. ¼W
145. .05mfd Pap. Con. 200V
149. 30,000 ohm Res. ¼W
154. .0035mfd Mica Con. 1000V
155. 50mmfd W/W Con.

ASTOR "ALLADDIN" C.F.

5-Valve Dual Wave A.C. Operated with Presto Tuning



VALVES: 6A7 Converter 6B7S I.F. 6B7 2nd I.F. and det. 42 output. 80 rectifier.
All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal.
I.F. 456 K.C.
SPEAKER: 1900 ohm field.
Numbers on diagram refer to parts list.

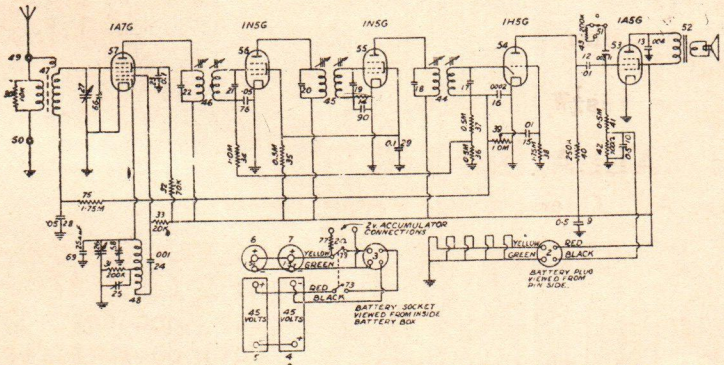
19. 10mfd Dry Elec.Con. Type 119.300V
32. Compensating Capacity Con. 15mfd.
50. 8mfd 450W.V. Wet Elec. Con.450W.V.
53. 8mfd 500V.,W.V. Wet Elec. Con. 500W.V.

ASTOR "ALLADDIN" C.F. (Contd.)

55. .05 Stedipower Con. 600V
56. 10,000 ohm Res. ½W
57. 5,000 ohm Res. 1W
58. .002 Pap. Con. 600V
60. .25mfd Con. 400V
61. .0035mfd Mica Con. 1000V
64. 30,000 ohm Res. ¼W
68. .001mfd Mica Con. 1000V
71. 50,000 ohm Res. ¼W
77. .1mfd Stedipower Con.400V
78. .1mfd Stedipower Con.400V
79. 10,000 ohm Res. ¼W
80. 400 ohm Res. ¼W
81. 10,000 ohm Res. ¼W
82. 100,000ohm Adj.Res.1W
83. .05mfd Stedipower Con.400V
84. 1meg.Res.¼W
85. .0001mfd Mica Con. 1000V
86. 1meg.Res.¼W
88. .1mfd Con. 400V
90. 50,000 ohm Res. ½W
91. 10mfd Dry Elec.Con.25W.V.
92. .0005mfd Mica Con. 1000V
93. .05mfd Con. 400V
94. 3,000 ohm Res. ¼W
95. 100,000 ohm Res. ¼W
97. .0001mfd Mica Con.1000V
98. 250,000 ohm Res. ¼W
99. 1meg.Res. ¼ Watt
100. .02mfd Stedipower Con.400V
101. 750,000 ohm Res. ¼W
102. 1.75 meg. Res. ¼W
103. 150,000 ohm Res. ¼W
104. 100,000 ohm Res. ¼W
105. .00025mfd Mica Con. 1000V
106. .1mfd Stedipower Con, 400V
108. .05mfd Stedipower Con. 400V
109. .02mfd Stedipower Con.400V
110. 150,000 ohm Res. ¼W
111. .0001mfd Mica Con. 1000V
112. 500,000 ohm Res. ¼W
114. .0005mfd Mica Con. 1000V
116. 300 ohm Res. 1Watt

ASTOR 500 G.F.

5-Valve Broadcast Battery Operated Receiver



VALVES: 1A7G Conver. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1A5G output.
All voltages to be measured with 1000 ohm per volt meter to chassis, no signal.
I.F. 455 K.C.
SPEAKER: Rola 66 permag.

9. .5mfd Pap. Con. 200V
10. .5mfd Pap. Con.200V
11. .002mfd Pap. Con.400V
12. .01mfd Pap. Con.400V
13. .004mfd Pap, Con.600V
14. ¼meg.Res.
15. .01mfd Pap Con.400V
16. .0002mfd Mica Con. 1000V
17. .0001mfd fixed Mica Con.1000V
18. .0001mfd fixed Mica Con. 1000V
19. .0001mfd fixed Mica Con.1000V
20. .0001mfd fixed Mica Con.1000V
21. .0001mfd fixed Mica Con.1000V
22. .0001mfd fixed Mica Con.1000V
23. .1mfd Pap.Con. 200V
24. .001mfd Mica Con.1000V
28. .05mfd Pap. Con.200V
29. .1mfd Pap. Con. 200V
30. 10,000ohmRes.¼W
31. 200,000ohm" "

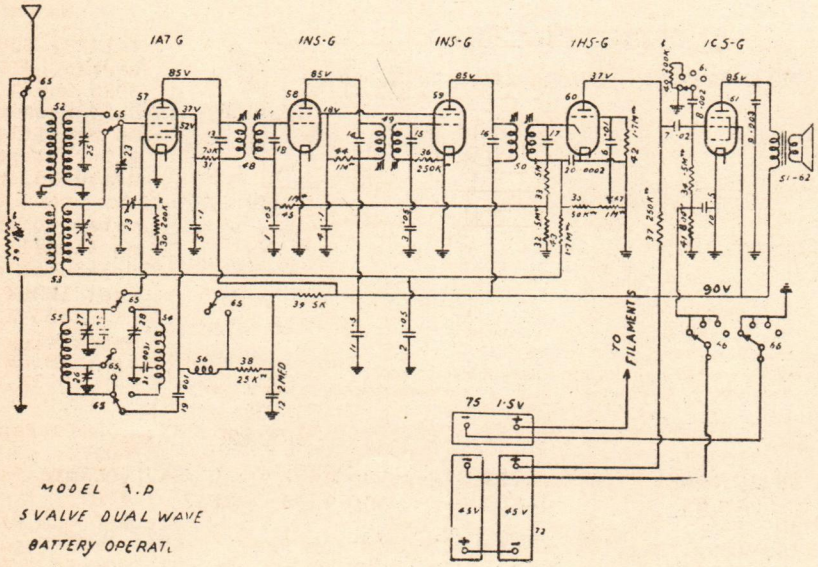
ASTOR 500 G.F. (Contd.)

32. 70,000 ohm Res. ¼W
33. 20,000 ohm Res. ¼W
34. 1meg.Res.¼W
35. 500,000 ohm Res. ¼W
36. 500,000 ohm Res. ¼W
37. 500,000 ohm Res. ¼W
38. 1.75meg.Res.¼W
39. 1meg. Volume Control
40. 250,000 ohm Res. ¼W
41. 500,000 ohm Res. ¼W
42. 700 ohm Res. ¼W
43. 200,000 ohm Res. ¼W
69. 25mfd W/W Con. 1000V
75. 1.75meg.Res. ¼W
76. .05mfd Pap. Con. 200V
77. 2 ohms W/W Res. 2W
90. .05mfd Pap. Con. 200V

CAUTION: If an accumulator is used. The set should never be connected to any other but a two volt accumulator. A battery charger should never be connected to the accumulator whilst the set is also connected. Failure to observe these precautions will shorten the life of the valves, and consequently the efficient operation of the set itself. If external air cell or filament battery is used be sure the voltage DOES NOT EXCEED 1½ volts.

ASTOR OA54 A.P.

5-Valve Dual Wave Battery Operated Receiver (1.4 Volt)



VALVES: 1A7G converter.
1N5G 1st I.F.
1N5G 2nd I.F.
1H5G det.
1C5G output.
All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.
Numbers on diagram refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola 6/11 Permag.

Broadcast coverage: 1650 K.C. to 540 K.C.
Short Wave " : 22.25 M.C. to 6.85 M.C.

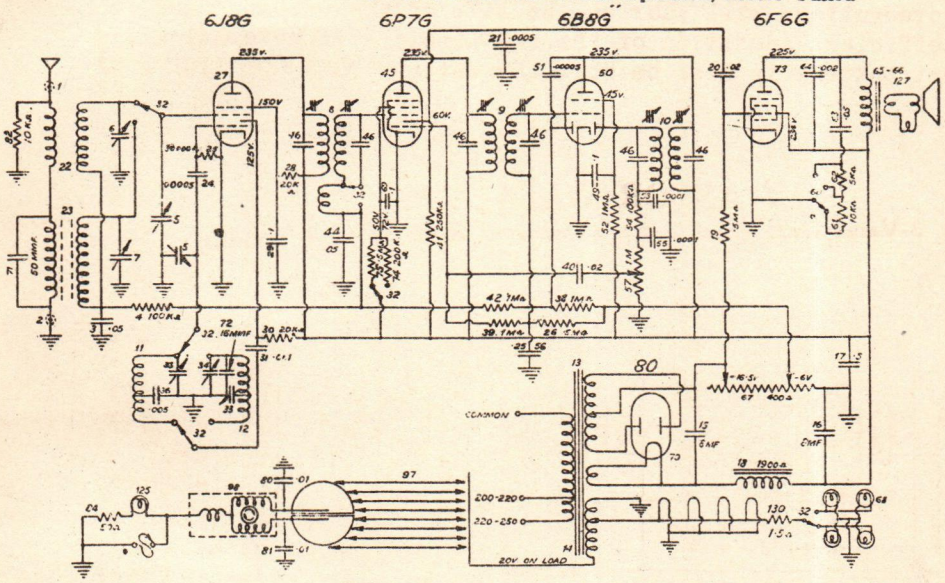
BATTERY LEADS: Black B negative 90V
Red B positive 90V
Green A negative 1.5V
Yellow A positive 1.5V

ASTOR OA54 A.P. (Contd.)

1. .05mfd Pap.Con.200V
2. .05mfd Pap.Con.200V
3. .05mfd Pap.Con.200V
4. .1mfd Pap.Con. 200V
5. .1mfd Pap.Con.200V
6. .01mfd Pap.Con.600V
7. .02mfd Pap.Con.400V
8. .002mfd Pap.Con600V
9. .003mfd Pap.Con600V
10. .5mfd Pap.Con. 200V
11. .5mfd Pap.Con. 200V
12. 2mfd Pap.Con. 400V
13. .0001mfd Mica Con. (silver)
14. .0001mfd Mica Con. (silver) 1000V
15. .0001mfd Mica Con. (silver) 1000V
16. .0001mfd Mica Con. (silver) 1000V
17. .0001mfd Mica Con. (silver) 1000V
18. .00005mfd Mica Con (silver) 1000V
19. .001mfd Mica Con. 1000V
20. .0002mfd Mica Con. 1000V
21. .003lmfd Mica Con. 1000V
22. 20mmfd W/W Con.
29. 10,000 ohm Res. ½W
30. 200,000 " " "
31. 70,000 " " "
32. 500,000 ohm " "
33. 500,000 " " "
34. 500,000 ohm Res. ½W
35. 50,000 ohm " "
36. 250,000 " " "
37. 250,000 " " "
38. 25,000 " " "
39. 5,000 " " "
40. 200,000 " " "
41. 800 ohm Res. ½W
42. 1.7meg. Res. ½W
43. 1.7meg. Res. ½W
44. 1meg. Res. ½W
45. 1meg. Res. ½W
47. 1meg.Vol. Cont.

ASTOR 910 980 B.G.

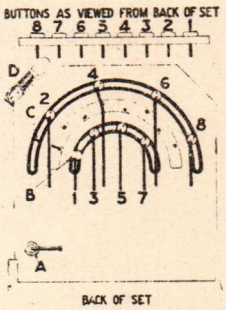
5-Valve Dual Wave A.C. Operated, Motor Tuned



MODEL BG

RANGE 1. 1620-540 KCS.
2. 50.-16.2 M.

1939 5V. A.C. DUAL WAVE MOTOR TUNED CONSOLE RECEIVER
INTERMEDIATE FREQUENCY 455 KCS.
ALL VOLTAGES TAKEN TO EARTH, WITH 1000Ω PER VOLT METER.
230 V. INPUT, 220-250V TAP.
NUMBERS REFER TO PARTS LIST



VALVES: 6J8G Converter. 6P7G I.F. 6B8G 2nd I.F. and det. 6F6G output. 80 rectifier.
All voltages measured on 1000 ohm per volt meter to chassis, no signal.
Broadcast coverage: 1620K.C. to 535 K.C.
Short Wave coverage: 18.5M.C. to 6.1M.C.

3. .05mfd Pap.Con.200V
4. 100,000 ohm Res. ½W
15. 8mfd Wet Elec. Con. 500r.v.
16. 8mfd Wet Elec.Con. 500r.v.
17. 5mfd Pap.Con. 400v.
19. 500,000 ohm Res. ½W
20. .02mfd Pap.Con.400V
21. .0005mfd Mica Con. 1000V
24. .00005mfd Mica Con. 1000V
25. 30,000 ohm Res. ½W
26. 500,000 ohm Res. ½W
28. 20,000 ohm Res. ½W
29. .1mfd Pap.Con.400V
30. 20,000 ohm Res. ½W
31. .001mfd Mica Con. 1000V
36. .005mfd Mica Con. 1000V
38. 1meg. Res. ½W
39. 1meg. Res. ½W
40. .02mfd Pap.Con. 400V
41. 250,000 ohm Res. ½W
42. 1meg. Res. ½W
46. .0001mfd Mica Con. 1000V
48. .05mfd Pap.Con. 200V
49. .1mfd Pap.Con. 400V
51. .00005mfd Mica Con. 1000V
52. 1meg.Res. ½W
53. .0001mfd Mica Con. 1000V
54. 100,000 ohm Res. ½W
55. .0001mfd Mica Con. 1000V
56. .25mfd Pap. Con. 200V
57. 1meg. Volume Cont. (Standard Tapped)
60. Tone Control Switch
61. 10,000 ohm Res. 1W
62. 5,000 ohm Res. ½W
63. .05mfd Pap.Con. 600V
64. .002mfd Pap.Con. 400V
67. 400 ohm W/W
69. .1mfd Pap.Con.400V
71. 50mmfd W/W Con.
72. 15mmfd W/W Con.
74. 200,000 ohm Res. ½W
75. 500,000 " " "
80. .01mfd Pap.Con. 400V
81. .01mfd Pap.Con. 400V
82. 10,000 ohm Res. ½W
84. 50 ohm W/W " 3W
126. 1.5 ohm W/W Res. 2 Watt.

ASTOR 910 B.G. (Contd.)

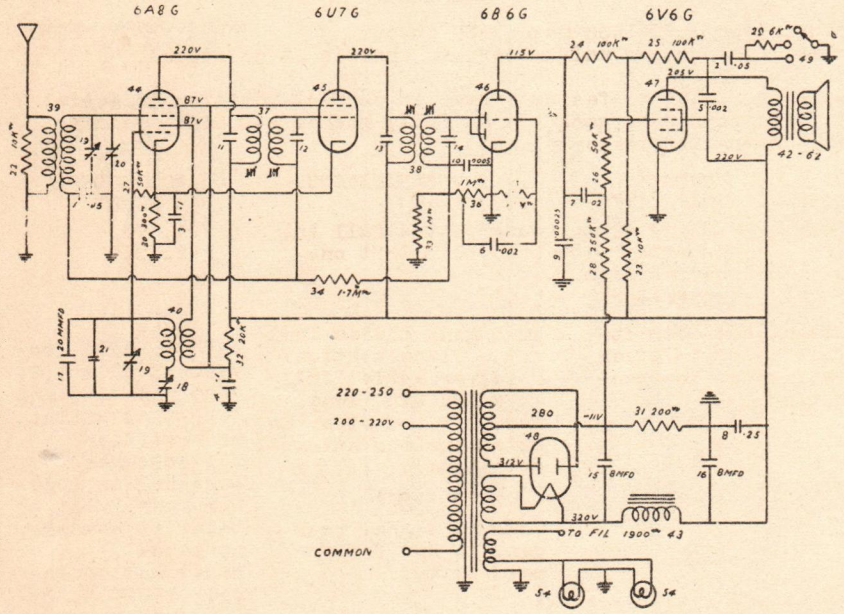
I.F. 455 K.C. SPEAKER: 1900 ohm field.

SETTING UP PRESS BUTTONS. (See illustration).

1. With tuning control, tune set to a desired station near the 600K.C. end of the dial.
2. Remove banana plug "A" from socket.
3. Press button No. 1 at left end of dial as viewed from the front of set, and globe "D" will light.
4. Move contact arm No. 1 on back of set (Illustration "B") to engage insulation strip "C", when globe "D" will go out, indicating that button No. 1 is correctly set up.
5. Tune next desired station, turning dial pointer to the right, as viewed from the front of set. Press button No. 2 and adjust contact No. 2. Continue on for each successive button in the same manner.
6. After setting all contacts replace banana plug and set is ready to operate. Press each button in turn to make sure set tunes accurately to each station.

ASTOR 154 A.N.

5-Valve Broadcast A.C. Operated Receiver



1. .05mfd Pap.Con.200V
2. .05mfd Pap.Con.400V
3. .1mfd Pap.Con. 200V
4. .1mfd Pap.Con. 400V
5. .002mfd Pap.Con.600V
6. .002mfd Pap.Con.600V
7. .02mfd Pap.Con.400V
8. .25mfd Pap.Con.400V
9. .00025mfd Mica Con. 1000V
10. .0005mfd Mica Con. 1000V
11. .0001mfd Mica Con. 1000V
12. .00005mfd Mica Con. 1000V
13. .0001mfd Mica Con. 1000V
14. .0001mfd Mica Con. 1000V
15. 8mfd Elec.Con.525PV
16. 8mfd Elec.Con.525PV
17. 20mmfd Wire Wound Cond.
22. 10,000 ohm Res. ½W
23. 10,000 ohm Res. ½W
24. 100,000 ohm " "
25. 100,000 ohm Res. ½W
26. 50,000 ohm Res. ½W
27. 50,000 ohm Res. ½W
28. 250,000 ohm Res. ¼W
29. 5,000 ohm Res. ¼W
30. 300 ohm Res. ½W
31. 200 ohm Res. 1W
32. 20,000 ohm Res. 1W
33. 1meg. Res. ½W
34. 1.7meg. Res. ½W
35. 10 meg. Res. 1 Watt
36. 1meg. Vol. Control

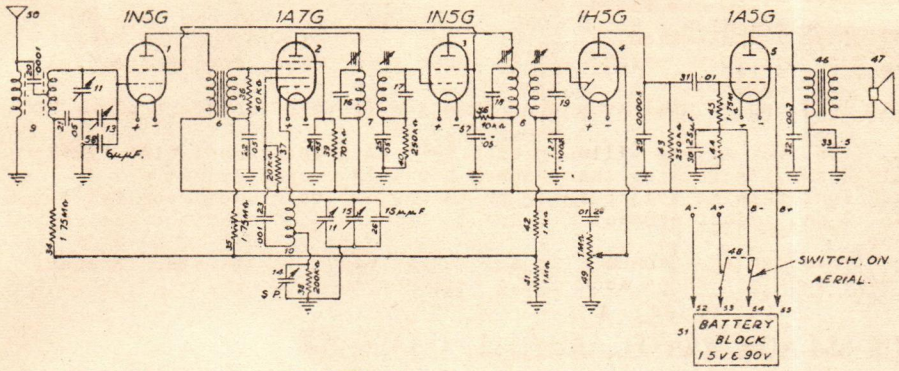
I.F. 455 K.C. SPEAKER: 1900 ohm field. Tuning Range 1650K.C. to 540K.C.
VALVES: 6A8G Converter. 6U7G I.F. 6B6G det. 6V6G output. 80 rectifier. All voltages shown on diagram to be measured on 1000 ohm per volt meter to chassis, at no signal. Numbers on diagram refer to parts list.

ASTOR G.C. (PORTABLE)

5-Valve Broadcast Dry Battery Operated Receiver

20. .0001 Fixed Mica Con. 1000V
21. .05 Pap.Con.200V
22. .05 Pap.Con.200V
23. .001 Fixed Mica Con. 1000V
24. .05 Pap.Con.200V
25. .05 Pap.Con.200V
26. 15mmfd W/W Con.
27. .0002 Fixed Mica Con. 1000V
28. .01 Pap.Con.600V
29. .00005 Fixed Mica Con. 1000V
30. 25mfd Elec.Con. 25V
31. .01 Pap.Con.600V
32. .003 Mica Con.1000V
33. .5 Pap.Con.200V
34. 1.75meg.Res. ½W
35. 1.75meg.Res. ½W
36. 40,000 ohm Res. (IN 6) ½W
37. 20,000 ohmRes. ¼W
38. 200,000 " " "
39. 70,000 " " "
40. 250,000 " " "
41. 1meg.Res. ½W
42. 1meg.Res. ½W
43. 250,000 ohmRes. ½W
44. 1,000 " " "
45. 1.75meg. Res. ½
46. 25,000 ohm Input Transformer
47. 6-inch Permag. Speaker Type6-11

ASTOR G.C. (PORTABLE) Contd.



48. Double Pole Battery Switch
49. 1meg.Vol.Control
50. Telescopic Rod Aerial
51. 1.5V-90V Battery Block
52. Spring Battery Contact A Negative
53. Spring Battery Contact A positive
54. Spring Battery Contact B negative
55. Spring Battery Contact B positive
56. 10,000 ohm Res. ½W

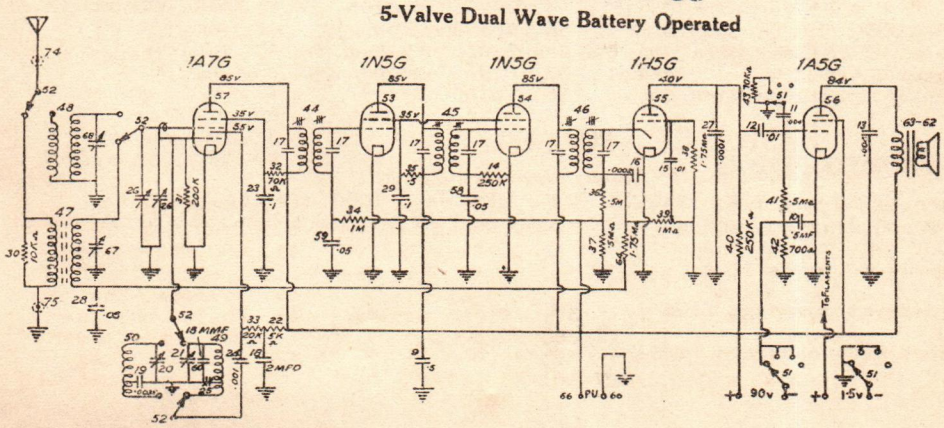
I.F. 455 K.C. SPEAKER: Permag.
VALVES: 1N5G R.F. 1A7G Converter. 1N5G I.F. 1H5G det. 1A5G output.
All voltages to be measured with 1000 ohm per volt meter, to chassis at no signal.
Tuning range from 1650 K.C. to 525 K.C.
Place set on its battery in working position, fasten aerial in correct position in aerial guide bush (screw "G", Fig.3). With condenser gang plates fully meshed set dial reading with the 100° mark at right angles to the speaker frame.

OPERATION	FREQUENCY	GENERATOR CONNECTIONS	DUMMY CAPACITY	INSTRUCTIONS	ADJ.PADDER SCREW
1.	455Kc.	To grid of 1A7G	.01mfd Mica condenser in series with generator.	Gang plates full in, grid clip left on.	94, 93, 92, 91
2.	1650Kc.	Radiate signal by connecting 2 ft. of wire in a vertical position to the generator output.		Turn gang plates full out. Place vertical receiver aerial fully extended 6in. away from 2ft. of wire on generator and attenuate signal.	15
3.	1400Kc.	" " "		Tune in signal.	13
4.	600Kc.	" " "		Tune in signal rock gang to and fro for max. output.	14

Repeat all operations.

ASTOR 930 TYPE GG

5-Valve Dual Wave Battery Operated



9. .5mfd Pap.Con. 200V
10. .5mfd Pap.Con. 200V
11. .004mfd Pap. Con.600V
12. .01mfd Pap. Con. 400V
13. .004mfd Pap. Con.600V
14. 250,000 ohm Res. ½ Watt
15. .01mfd Pap. Con. 400V
16. .0002mfd Mica Con. 1000V

ASTOR 930 TYPE GG (Contd.)

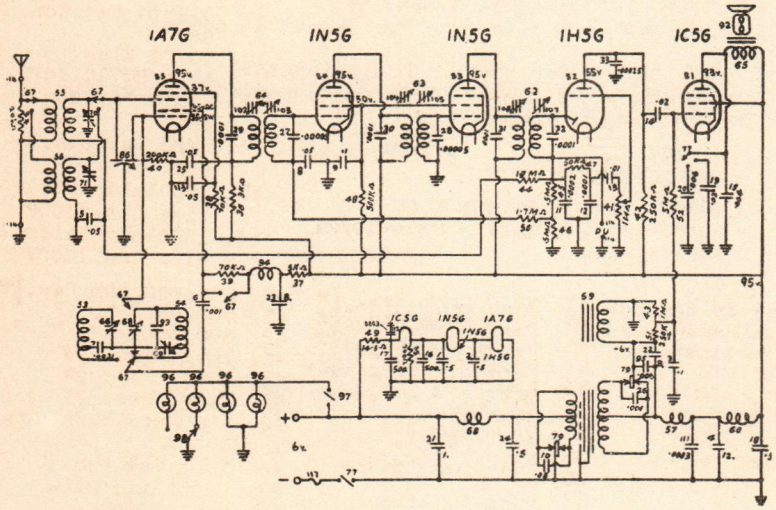
17. .0001mfd Sil.Mica Con. (6) 1000V
18. 2mfd Pap.Con.400V
19. .0035mfd Mica Con. 1000V
22. 5,000 ohm Res. $\frac{1}{4}$W
23. .1mfd Pap.Con.200V
24. .001mfd Mica Con. 1000V
27. .0001mfd Mica Con. 1000V
28. .05mfd Pap. Con. 200V
29. .1mfd Pap.Con. 200V
30. 10,000ohmRes. $\frac{1}{2}$W
31. 200,000 " " "
32. 70,000 " " "
33. 20,000 ohm Res. $\frac{1}{2}$W
34. 1meg.Res. $\frac{1}{2}$W
35. 500,000 ohm Res. $\frac{1}{2}$W
36. 500,000 ohm Res. $\frac{1}{4}$W
37. 500,000 ohm Res. $\frac{1}{2}$W
38. 1.75meg.Res. $\frac{1}{4}$W
39. 1meg. Vol.Control
40. 250,000 ohm Res. $\frac{1}{4}$W
41. 500,000 ohm Res. $\frac{1}{2}$W
42. 700 ohm Res. $\frac{1}{4}$W
43. 70,000 ohm Res. $\frac{1}{4}$W
58. .05mfd Pap.Con. 200V
59. .05mfd Pap.Con. 200V
60. 15mmfd Wire Wound Con.
64. 1.75meg. Res. $\frac{1}{4}$W

I.F. 455 K.C. SPEAKER: Permag. type 10/21

VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1A5G output.
All voltages shown on diagram, and should be measured on 1000 ohm per volt meter to chassis at no signal. Numbers on diagram refer to parts list.

ASTOR 854 AQM MANTEL AND 9540 AQ CONSOLE

5-Valve Vibrator Operated Dual Wave Receivers



1. .5mfd Paper Con. 200V
2. .5mfd Paper Con. 200V
3. .1mfd Paper Con. 200V
4. 12mfd Electrolytic Con. (ET1003) 350PV
5. .05mfd Paper Con. 200V
6. .001mfd Mica Con. 1000V
7. .003lmfd Mica Con. 1000V
8. .05mfd Paper Con. 200V
9. .1mfd Paper Con. 200V
10. .05mfd Paper Con. 200V
11. .0002mfd Mica Con. 1000V
12. .0001mfd Paper Con.1000V
13. .01mfd Paper Con. 400V
14. .02mfd Paper Con. 400V
15. .004mfd Paper Con. 600V
16. 500mf Electrolytic Con. (EEC901) 12VP
17. 500mf Electrolytic Con. (EEC901) 12VP
18. .5mfd Braided Paper Con. 200V
19. .02mfd Pap.Con.400V
20. .006mfd Pap.Con. 600
21. 1mfd Braided Paper Con. 200V
22. 8mfd Electrolytic Con. 350PV
23. 8mfd Electrolytic Con. 350PV
24. .5mfd Braided Paper Con. 200V
25. .05mfd Pap.Con.200V
26. .008mfd Mica Con. 2000V
27. T.C.C. .00005mfd Silver Mica Con.
28. T.C.C. .00005mfd Silver Mica Con.
29. T.C.C. .0001mfd Silver Mica Con.
30. T.C.C. .0001mfd Silver Mica Con.
31. T.C.C. .0001mfd Silver Mica Con.
32. T.C.C. .0001mfd Silver Mica Con.
33. .00025mf Mica Con. 1000V
34. 20,000 ohmRes. $\frac{1}{2}$W
35. 700 ohm Res. $\frac{1}{2}$W
36. 3,000 ohm Res. $\frac{1}{2}$W
37. 5,000 ohm Res. $\frac{1}{2}$W
38. 70,000 " " "
39. 70,000 ohm Res. $\frac{1}{2}$W
40. 200,000 " " "
41. 1meg. Vol. Cont.
42. 250,000 ohmRes. $\frac{1}{2}$W
43. 1.0meg.Res. $\frac{1}{2}$W
44. 1.75meg.Res. $\frac{1}{2}$W
45. 500,000ohm Res. $\frac{1}{2}$W
46. 500,000 " " "
47. 50,000 " " "
48. 500,000 " " "
49. 14.5 ohm Res. $\frac{1}{2}$W
50. 1.75meg. " "
51. 250,000 ohm" "
52. 500,000 ohm" "

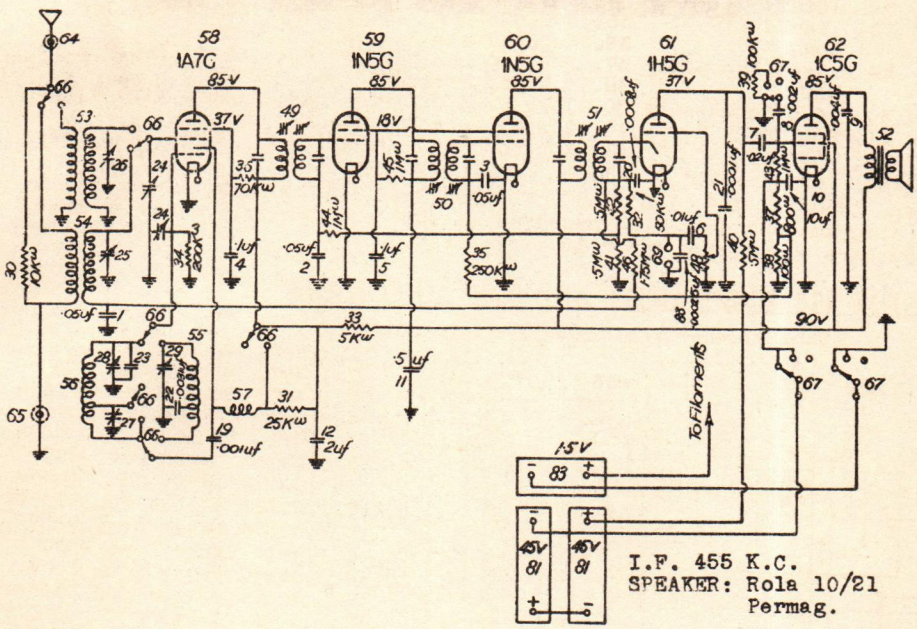
I.F. 455 K.C. SPEAKER: Permag.

VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1C5G output.
All voltages are shown on diagram, and should be measured on 1000 ohm per volt meter to chassis at no signal.
Numbers on diagram refer to parts list.

Broadcast coverage from 1650 K.C. to 540 K.C.
Short Wave coverage from 22.25 M.C. to 6.8 M.C.

ASTOR 254 B.N.

5-Valve Dual Wave Battery Operated Receiver (1.4 Volt)



1. .05mfd Pap.Con. 200V
2. .05mfd Pap.Con. 200V
3. .05mfd Pap.Con. 200V
4. .1mfd Pap.Con. 200V
5. .1mfd Pap.Con. 200V
6. .01mfd Pap.Con. 600V
7. .02mfd Pap.Con. 400V
8. .002mfd Pap.Con. 600V
9. .004mfd Pap.Con. 600V
10. 10mfd Elec. type ET717 40PV
11. .5mfd Pap.Con. 200V
12. 2mfd Pap.Con. 400V
13. .0001mfd Silver Mica Con.1000V
14. .0001mfd Siler Mica Con.1000V
15. .0001mfd Silver Mica Con. 1000V
16. .0001mfd Silver Mica Con. 1000V
17. .00005mfd Silver Mica Con. 1000V
18. .00005mfd Silver Mica Con. 1000V
19. .001mfd Mica Con. 1000V
20. 1.7meg.Res.$\frac{1}{2}$W
21. .0001mfd Mica Con. 1000V
22. .0031mfd Mica Con. 1000V
23. 20mmfd W/WCon.
30. 10,000ohmRes.$\frac{1}{2}$W
31. 25,000ohm Res. $\frac{1}{2}$W
32. 50,000ohm Res. $\frac{1}{2}$W
33. 5,000 ohm Res. $\frac{1}{2}$W
34. 200,000 ohm " "
35. 250,000 " " "
36. 70,000 " " "
37. .800 ohm Res. $\frac{1}{2}$W
38. 100 " " "
39. 100,000" " "
40. 500,000 ohm Res.$\frac{1}{2}$W
41. 500,000 " " "
42. 500,000 " " "
43. 1meg. Res. $\frac{1}{2}$W
44. 1meg. Res. $\frac{1}{2}$W
45. 1meg. Res. $\frac{1}{2}$W
46. .0002mfd Mica Con. 1000V
48. 1meg.Vol.Cont.
86. .00025mfd Mica Con. 1000V

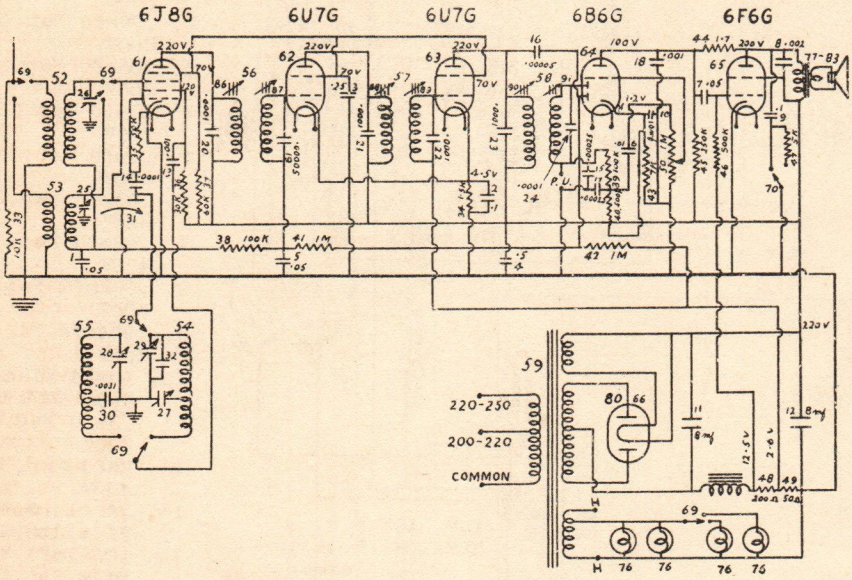
Broadcast Coverage = 1650 K.C. to 540 K.C.
Short Wave " = 22.25 M.C. to 6.85 M.C.
VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1C5G output.
BATTERY LEADS: Black B negative 90 volts. Red B positive 90 volts. Green A negative 1.5 volts. Yellow A positive 1.5 volts. All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.

ASTOR 664 B.K. AND 364 BKM.

6-Valve Dual Wave A.C. Operated Receivers

1. .05mfd Pap.Con.200V
2. .1mfd Pap.Con. 200V
3. .25mfd Pap.Con.400V
4. .5mfd Pap.Con.400V
5. .05mfd Pap.Con.200V
6. .01mfd Pap.Con.400V
7. .05mfd Pap.Con.400V
8. .002mfd Pap.Con.600V
9. .1mfd Pap.Con.400V
10. 10mfd Dry Elec.Con. Type ET717 40VP
11. 8mfd Dry Elec.Con. Type ET1015 525VP
12. 8mfd Dry Elec.Con. Type ET1015 525VP
13. .001mfd Mica Con. 1000V
14. .00005mfd Mica Con. 1000V
15. .00025mfd Mica Con. 1000V
16. .00005mfd Mica Con. 1000V
17. .00025mfd Mica Con. 1000V
18. .001mfd Mica Con. 1000V
19. .00005mfd Silver Mica Con. 1000V
20. .0001mfd Silver Mica Con. 1000V
21. .0001mfd Silver Mica Con. 1000V
22. .0001mfd Silver Mica Con. 1000V
23. .0001mfd Silver Mica Con. 1000V
24. .0001mfd Silver Mica Con. 1000V
30. .0031mfd Mica Con.
32. 20mmf W/W Bifilar capacity
33. 10,000 ohm Carbon Res. $\frac{1}{2}$ Watt
34. 1,500 ohm Carbon Res. $\frac{1}{2}$ Watt
35. 50,000 ohm Carbon Res. $\frac{1}{2}$ Watt
36. 30,000 ohm Carbon Res. 1 Watt
37. 60,000 ohm Carbon Res. $\frac{1}{2}$ Watt
38. 100,000 ohm Carbon Res. $\frac{1}{2}$ Watt

ASTOR 664 B.K. AND 364 BKM. (Contd.)

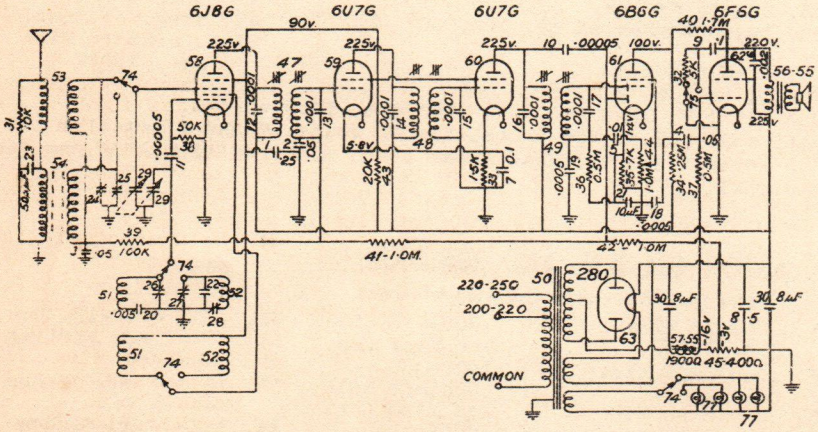


39. 100,000 ohm Carbon Res. ½W
40. 500,000 ohm Carbon Res. ½W
41. 1meg. ohm Carbon Res. ½W
42. 1megohm Carbon Res. ½W
43. 7,000 ohm Carbon Res. ½W
44. 1.7meg. Carbon Res. ½W
45. 250,000 ohm Carbon Res. ½W
46. 500,000 ohm Carbon Res. ½W
47. 5,000 ohm Carbon Res. ½W
48. 200 ohm W/W Res. 3 Watt
49. 50 ohm W/W Res. 3 Watt
50. 1meg. Vol.Cont.

I.F. 455 K.C. SPEAKER: 1900 ohm field.
VALVES: 6J8G Converter. 6U7G 1st I.F. 6U7G 2nd I.F. 6B6G det. 6F6G output. 80 rectifier.
All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.
Broadcast coverage: 1650 K.C. to 540 K.C. Short Wave coverage: 22.25M.C. to 6.8 M.C.

ASTOR 904 (TYPE AS)

6-Valve A.C. Dual Wave Receiver



VALVES: 6J8G Converter. 6U7G 1st I.F. 6U7G 2nd I.F. 6B6G det. 6F6G output. 80 rectifier.

All voltages shown on diagram and should be measured on 1000 ohm per volt meter to chassis at no signal.

Broadcast coverage is from 1620K.C. to 535K.C. Short Wave from 18.5M.C. to 6.1 M.C.

Standard Alignment procedure.
I.F. 455 K.C.
SPEAKER FIELD: 1900 ohms.

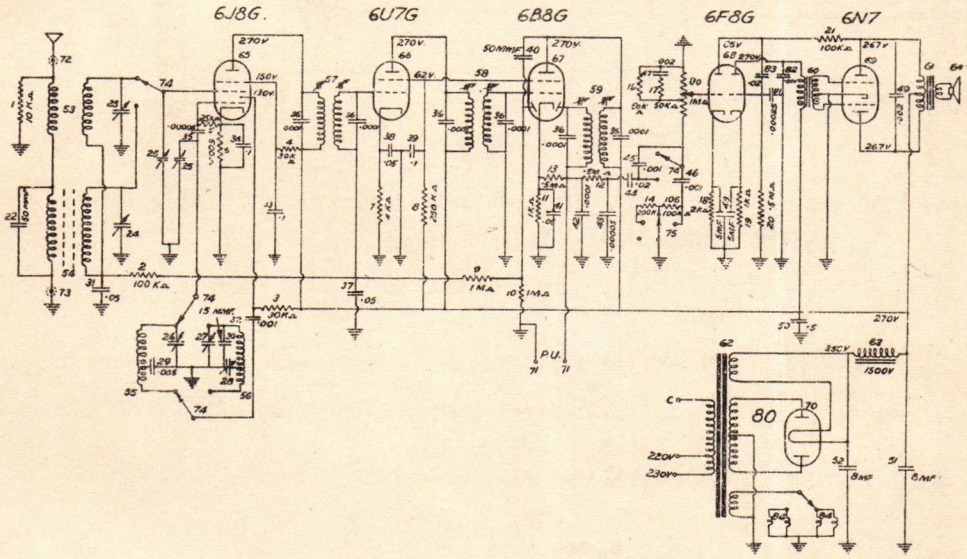
1. .25mfd Pap.Con. 400V
2. .05mfd Pap.Con. 200V
3. .05mfd Pap.Con. 200V
4. .05mfd Pap.Con. 400V
5. .01mfd Pap.Con. 400V
6. .002mfd Pap.Con. 400V
7. .1mfd Pap.Con. 200V
8. .5mfd Pap.Con. 400V
9. .1mfd Pap.Con. 400V
10. .00005mfd Mica Con. 1000V
11. .00005mfd Mica Con. 1000V
12. .0001mfd Mica Con. 1000V

ASTOR 904 (TYPE AS) (Contd.)

13. .0001mfd Mica Con. 1000V
14. .0001mfd Mica Con. 1000V
15. .0001mfd Mica Con. 1000V
16. .0001mfd Mica Con. 1000V
17. .0001mfd Mica Con. 1000V
18. .0005mfd Mica Con. 1000V
19. .0005mfd Mica Con. 1000V
20. .005mfd Mica Con. 1000V
21. 10mfd Dry Elec. Con. 25V
22. 15mmfd W/W Con.
23. .50mmfd W/W, Con.
30. 8-8 Dry Elec. Con.525V.p.v.
31. 10,000ohmRes.½W
32. 5,000 " " "
33. 1,500 " " "
34. 250,000" " "
35. 7,000 " " "
36. 500,000" " "
37. 500,000 ohm Res. ½W
38. 50,000 " " "
39. 100,000 " " "
40. 1.7 meg. Res. ½W
41. 1meg. Res. ½W
42. 1meg. Res. ½W
43. 20,000 ohm Res. 1W
44. 1meg. Vol. Cont.
45. 400 ohm W/W Res.
46. 1.5 ohm W/W Res.

ASTOR 920E

6-Valve Dual Wave A.C. Operated Receiver



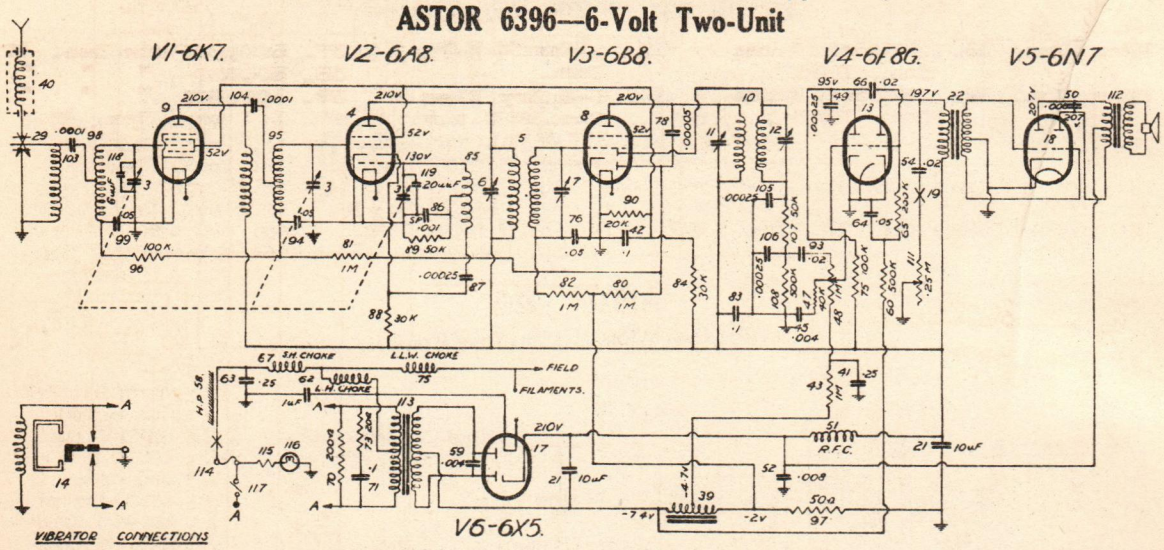
VALVES: 6J8G - Converter.
6U7G I.F.
6B8G 2nd I.F. and det.
6F8G 1st audio and driver.
6N7 output.
80 rectifier.
All voltages to be measured with 1000 ohm per volt meter, to chassis, no signal.
Numbers on circuit refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola F/10

1. 10,000 ohm Res. I.R.C. ¼W
2. 100,000 ohm Res. I.R.C. ¼W
3. 30,000 ohm Res. I.R.C. 1W
4. 30,000 ohm Res. I.R.C. ½W
5. 25,000 ohm Res. I.R.C. ½W
6. 500 ohm Res. ½W
7. 4,000 ohm " 1W
8. 250,000 ohm Res I.R.C. ¼W
9. 1meg. Res. I.R.C. ¼W
10. 1meg. Res. I.R.C. ½W
11. 1,000 ohmRes. ¼W
12. 500,000 ohm Res I.R.C. ¼W
13. 500,000 ohm Res I.R.C. ¼W
14. 200,000 ohm Res I.R.C. ¼W
16. 50,000 ohm Res. I.R.C. ¼W
17. 50,000 ohm Res. I.R.C. ½W
18. 2,000 ohm Res. ½W
19. 1,000 ohm Res. ½W
20. 500,000 ohm Res. I.R.C. ¼W
21. 100,000 ohm Res. I.R.C. ½W
22. 50mmfd W/W Con.
29. .005 Simplex Mica Con.1000V
30. 15mmfd W/W Con.
31. .05mfd Pap.Con. Chanex 200V
32. .001 Mica Con.1000V
33. .1mfd Pap.Con. Chanex 400V
34. .1mfd Pap.Con. Chanex 400V
35. .00005mf Simplex Mica Con.1000V
36. .0001mfd Ceramic Mica Con.
37. .05mfd Pap.Con. Chanex 200V
38. .05mfd Pap.Con. Chanex 200V
39. .1mfd Pap.Con. Chanex 400V
40. .00005mf Mica Con. 1000V
41. .05mfd Pap.Con. Chanex 200V
42. .0001 Mica Con. 1000V
43. .00005mf Mica Con. 1000V
44. .02mfd Pap.Con. Chanex 400V
45. .001mfd Mica Con. 1000V
46. .001mfd Mica Con. 1000V
47. .002mfd Pap. Con. 600V
48. 5/5mfd Elec. Con. 15p.v.
49. .002mfd Pap.Con. Chanex 400V
50. .5mfd Pap.Con. Chanex 400V
51. 16mfd Elec. Condenser 500 p.v.
52. 8mfd electrolytic Condenser 500 p.v.
80. 1megohm Tapped Volume Control.
81. .00025mf Mica Condenser 1000V
82. .001mf Mica Condenser 1000V
83. .02mf Pap.Con. 500V
106. 100,000 ohm Res. ¼W
110. 1.5 ohm W/W Resistor.

ASTOR AUTOMOBILE RECEIVERS

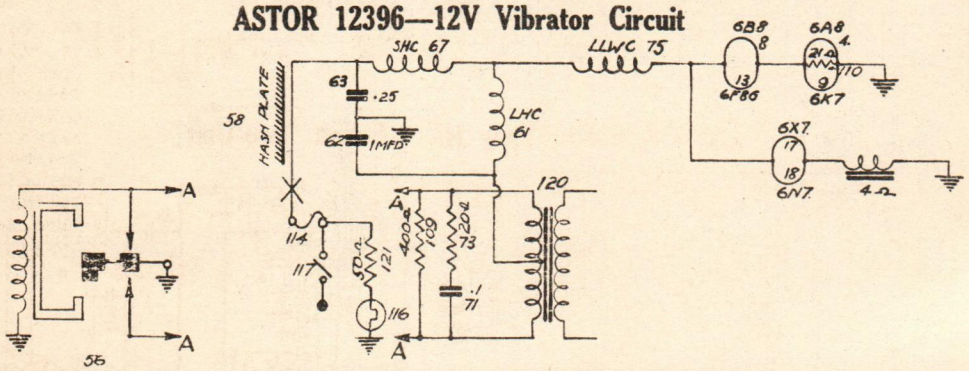
ASTOR 6396 (Type EB) & 12396 (Type AE)

ASTOR 6396—6-Volt Two-Unit



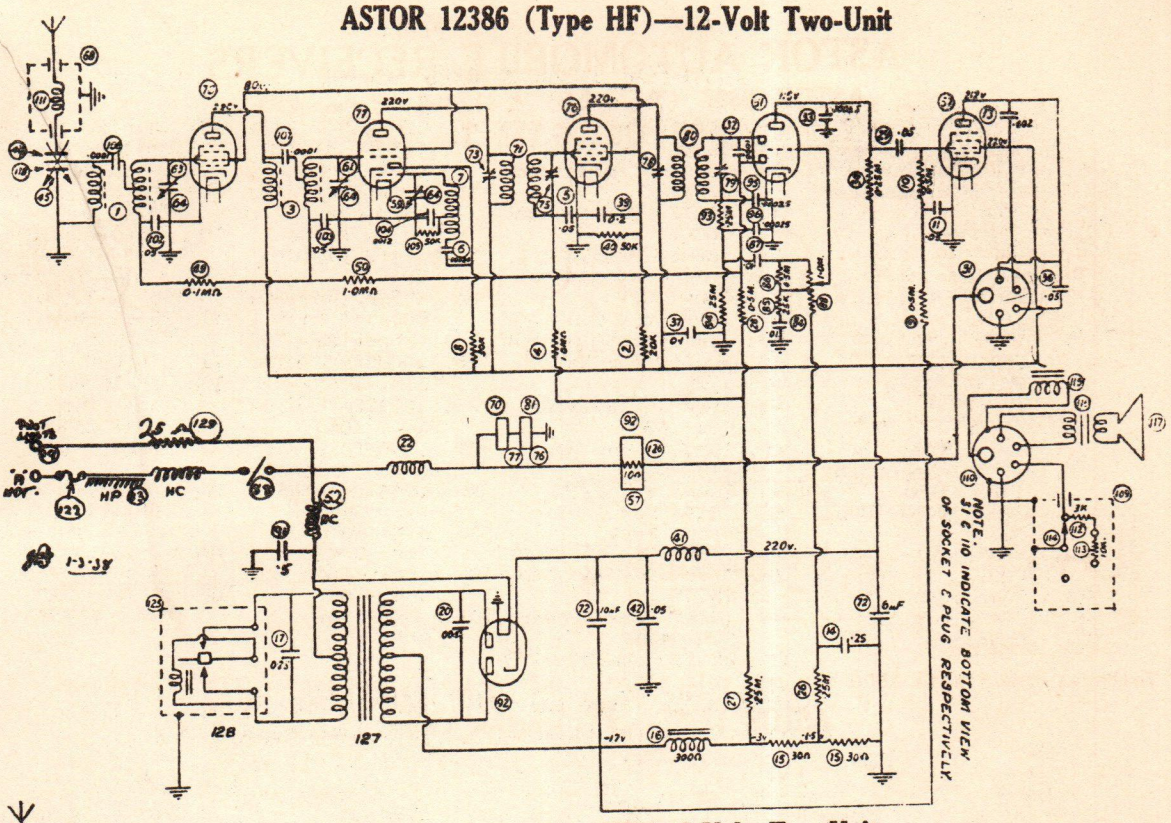
Voltages taken with 1000 ohm per volt meter. Intermediate Frequency - 173 kilocycles.

ASTOR 12396—12V Vibrator Circuit

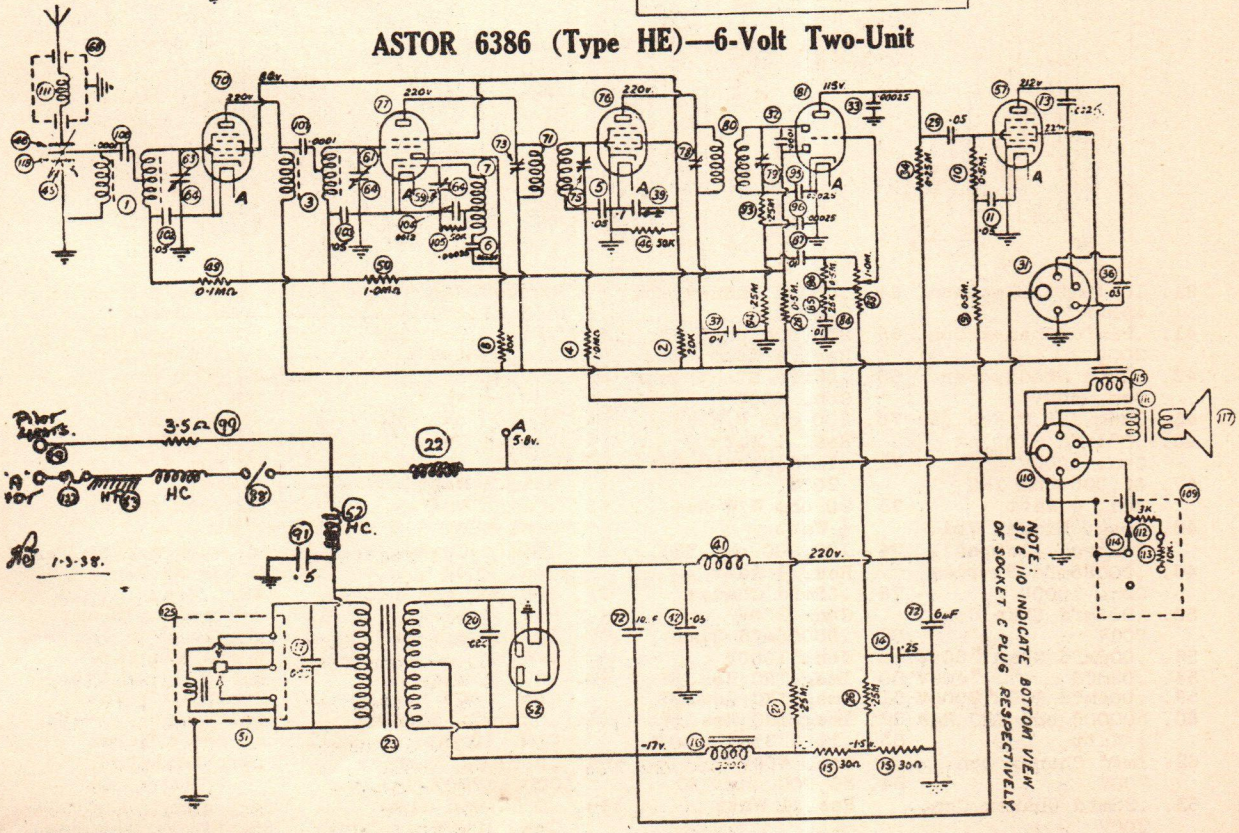


21. 10/10mfd Elec.Con. 450VP
41. .25mfd Chanex Con. 200V
42. .1mfd Stedipower Con. 400V
43. 1meg.I.R.C.Res.½W
45. .004mfd Simplex Con. 1000V
47. 40,000 ohm IRC Res. ½ Watt
48. 1meg. Midget Vol. Control (tapped)
49. .00025mfd Simplex Con. 1000V
50. .006mfd Chan.Con. 600V
52. .008mfd Chan."600V
54. .02mfd " "400V
59. .004mfd TCC "2000V
60. 500,000 ohm IRC Res ½ Watt
62. 1mfd Chanex Con. 200V
63. .25mfd Chanex Con. 200V
64. .05mfd Chanex Con 200V
65. 200,000 ohm IRC Res. ½ Watt
66. .02mfd Stedipower Con. 400V
70. 200 ohm W/W IRC Res. 1 Watt
71. .1mfd Chanex Con. 200V
73. 20 ohm W/W Res. ½ Watt
74. 100,000 ohm IRC Res. ½ Watt
76. .05mfd Chanex Con. 200V
78. .00005mfd Simp. Con. 1000V
80. 1meg.IRC Res.½W
81. 1meg.IRC Res.½W
82. 1meg.IRC Res.½W
83. .1mfd Stedipower Con. 400V
84. 30,000 ohm IRC Res. 1 Watt
86. Series Pad 10/66 mmfd Simp.Con.
87. .00025mfd Simp. Con. 1000V
88. 30,000 ohm IRC Res. ½ Watt
89. 50,000 ohm IRC Res. ½ Watt
90. 20,000 ohm IRC Res. ½ Watt
93. .02mfd Chanex Con. 400V
94. .05mfd Chanex Con. 200V
96. 100,000 ohm IRC Res. ½ Watt
97. 50 ohm W/W Res 2 Watt
99. .05mfd Chanex Con. 200V
103. .0001mfd Simplex Con. 1000V
104. .0001mfd Simplex Con. 1000V
105. .00025mfd Simp. Con. 1000V
106. .00025mfd Simplex Con. 1000V
107. 50,000 ohm IRC Res. ½ Watt
108. 500,000 ohm IRC Res. ½ Watt
109. 400 ohm W/W IRC Res. 1 Watt
110. 21 ohm W/W Res. ½ Watt
111. 250,000 ohm tone control
114. 15 ampere fuse
115. 7 ohm EB Pea lamp Res.
116. 6-8 volt .15 amp pea lamp
118. 6mmfd W/W Capacity
119. 20mmfd W/W Capacity
121. 50 ohm W/W Pea lamp Resistor.

ASTOR 12386 (Type HF)—12-Volt Two-Unit



ASTOR 6386 (Type HE)—6-Volt Two-Unit

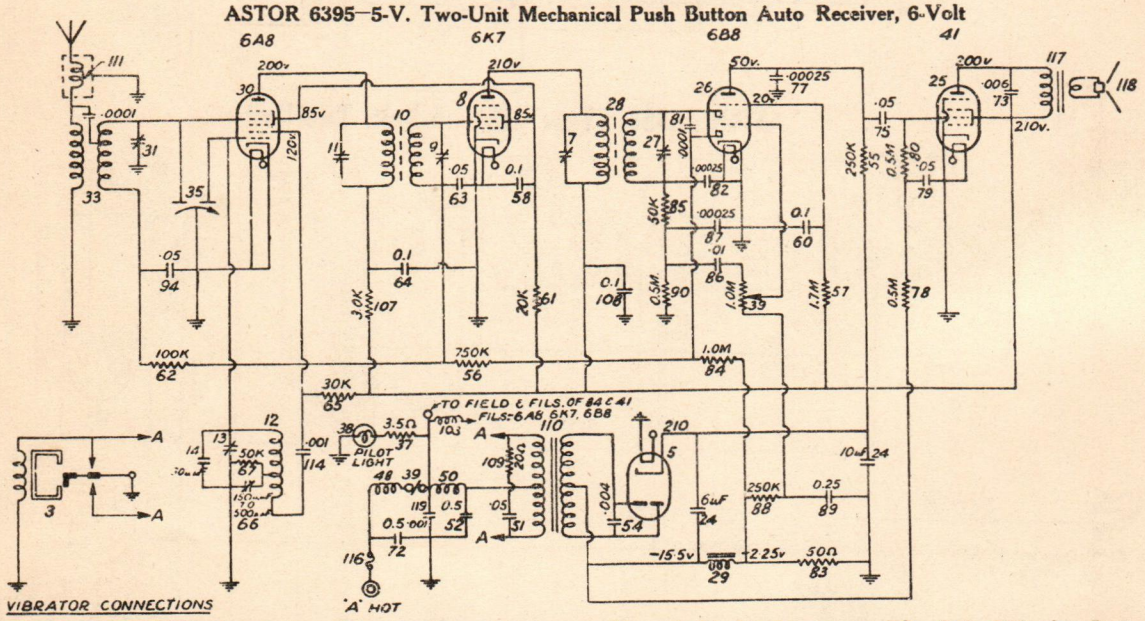


ASTOR 12386 & 6386 (Contd.)

2. 20,000 ohm Res.1W
4. 1meg. Res. 1/3W
5. .05mfd Pap.Con.200V
6. .00024mfd mica Con 1000V
8. 30,000 ohm Res.½W
9. .5meg.Res. 1/3 W
10. .5meg.Res. 1/3W
11. .05mfd Pap.Con. 200V
13. .002mfd Paper Con. 600V
14. .25mfd Paper Con. 200V
15. 60 ohm C.T. W/W Res. 1 Watt
16. Filter choke 5.5 H. 300 ohms
17. .25mfd Paper Con 200V
20. .004mfd Mica Con 2000V
26. .25meg.Res.1/3W
27. .25meg.Res.1/3W
28. .5meg.Res. 1/3W
29. .05mfd Pap.Con.400V (leads out one end)
32. .0001mfd mica Con 1000V
33. .00025mfd mica Con 1000V
34. .25meg.Res.1/3W
36. .05mfd Stedipower Con. 600V
37. .1mfd pap.Con.400V
39. .2mfd pap.Con.400V
40. 50,000 ohm Res. 1/3W
42. .05mfd Stedipower Con. 400V
49. 100,000 ohm Res. 1/3 Watt
50. 1meg.Res. 1/3W
53. .5mfd Metal clad cond. 200V
54. .5mfd pap.Con.200V
72. 6/10 mfd Elec.Con. 350WV
84. .01mfd Stedipower Con. 400V
85. 25,000 ohm Res.1/3W
86. .5meg.Res.1/3W
87. .01mfd Stedipower Con.400V
88. 1meg.Centralab tapped vol. control & switch
91. .5mfd pap.Con. 200V
93. .25meg.Res.(in 80) 1/3 Watt
94. .25meg.Res.1/3W
95. .00025mfd mica Con. 1000V
96. .00025mfd mica Con. 1000V
97. .006mfd Stedipower Con.400V
98. .006mfd Stedipower Con.400V
99. 3.5 ohm W/W Res. 2 Watt
102. .05mfd pap. Con. 200V
103. .05mfd pap. Con. 200V
104. Series pad.Con. .0012mfd mica T.C.C.1000V
105. 50,000 ohm Res 1/3 Watt
106. .C001mfd mica T.C.C. 1000V
107. .0001mfd mica T.C.C. 1000V
112. 3000 ohmRes. 1/3 Watt
113. 10,000" " " "
122. 10-15 amp. Auto fuse
123. Dial pilot light 6.3V .15 amp.
124. Acoustinator Pilot light 6.3V .15 amp.
126. 10 ohm W/W Res. 10 Watt
129. 25 ohm W/W Res. 3 Watt

ASTOR 6395 (Type CG) AND 12395 (Type HC)

ASTOR 6395—5-V. Two-Unit Mechanical Push Button Auto Receiver, 6-Volt

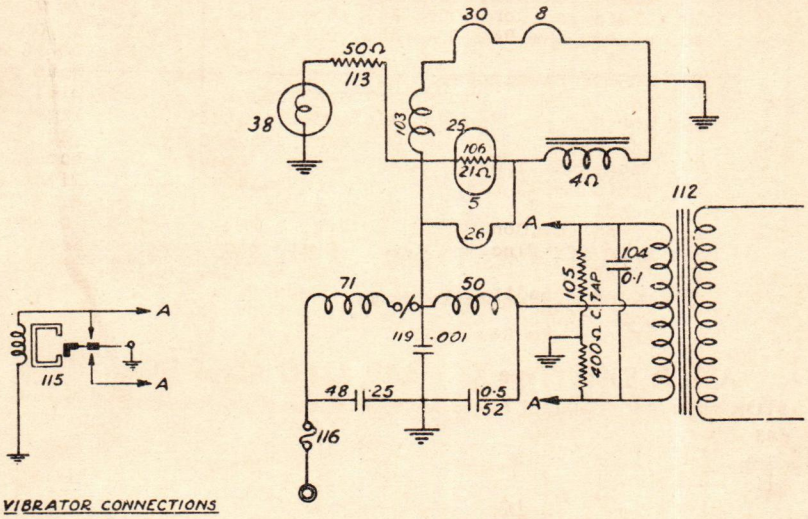


14. 30mmf W/W Capacity
24. 6/10mfd Elec.Cond.
29. 300 ohm Filter Choke
37. 3.5 ohm W/W Res.
38. 6-8 Volt .15 amp. Pea Lamp BC Type
39. 1meg.Midget Vol. Control & switch & Knob
51. .05mfd Pap.Con. 200V
52. .5mfd Pap.Con. 200V
54. .004mfd Mica Con 2000V
53. 5 pin socket
55. 250,000 ohm Res ½ Watt
56. 750,000 ohm Res ½ Watt
57. 1.7 meg.Res.½W
58. .1mfd Stedipower Con. 400V
60. .1mfd Stedipower Con. 400V
61. 20,000 ohm Res. 1 Watt
62. 100,000 ohm Res ½ Watt
63. .05mfd Chanex Con. 200V
64. .1mfd Stedipower Con. 400V
65. 30,000 ohm Res. ½ Watt
66. 150mmf to 500mmf
67. 50,000 ohm Res. ½ Watt
72. .5mfd Metalclad con. 200V
73. .006mfd Chanex Con. 600V
75. .05mfd Stedipower Con.
77. .00025mfd Mica Con. 1000V
78. 500,000 ohm Res. ½ Watt
79. .05mfd Chanex Con. 200V
80. 500,000 ohm Res ½ Watt
81. .0001mfd Mica Con. 1000V
82. .00025mfd Mica Con. 1000V
83. 50 ohm W/W 2 Watt Res.
84. 1meg.Res.½ Watt
85. 50,000 ohm Res. ½ Watt

ASTOR 6395 & 12395 (Contd.)

86. .01mfd Chanex Con. 400V
87. .00025mfd Mica Con. 1000V
88. 250,000 ohm Res. ¼ Watt
89. .25mfd Pap.Con 200V
90. 500,000 ohm Res. ¼ Watt
94. .05mfd Chanex 200V
104. .1mfd Chanex Con. 200V
105. 400 ohm C.T. W/W Res.
106. 21 ohm W/W Res.
107. 3,000 ohm Res. ¼ Watt
108. .1mfd Stedi-power Con.400V
109. 20 ohm W/W Res.
113. 50 ohm W/W 2W Res.
114. .001mfd Mica Con. 1000V
116. 15 amp fuse
118. 6" Underdash speaker 4 ohm field
119. .001mfd mica Con. 1000V

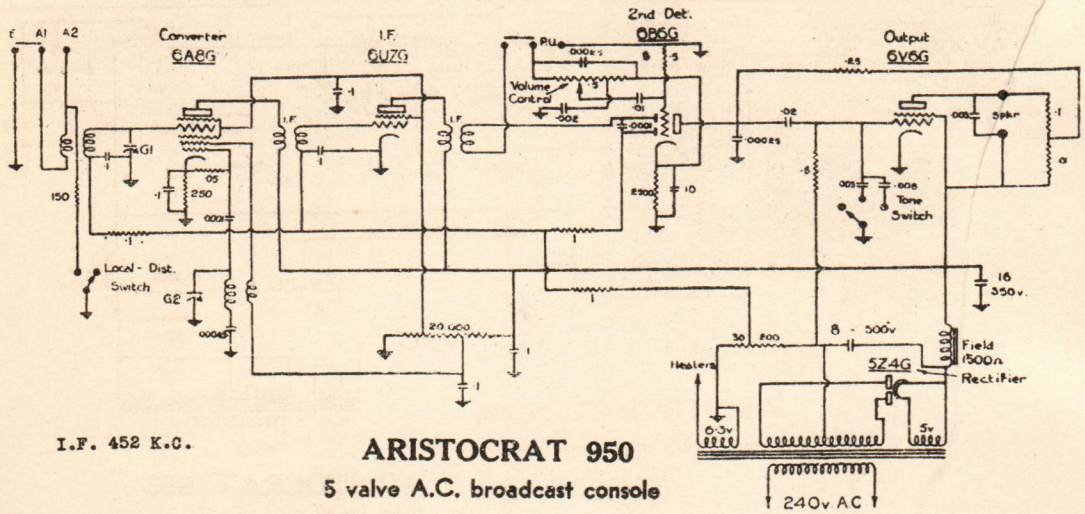
ASTOR 12395 (Vibrator Section), 12-Volt Two-Unit



VIBRATOR CONNECTIONS

ARISTOCRAT RADIO

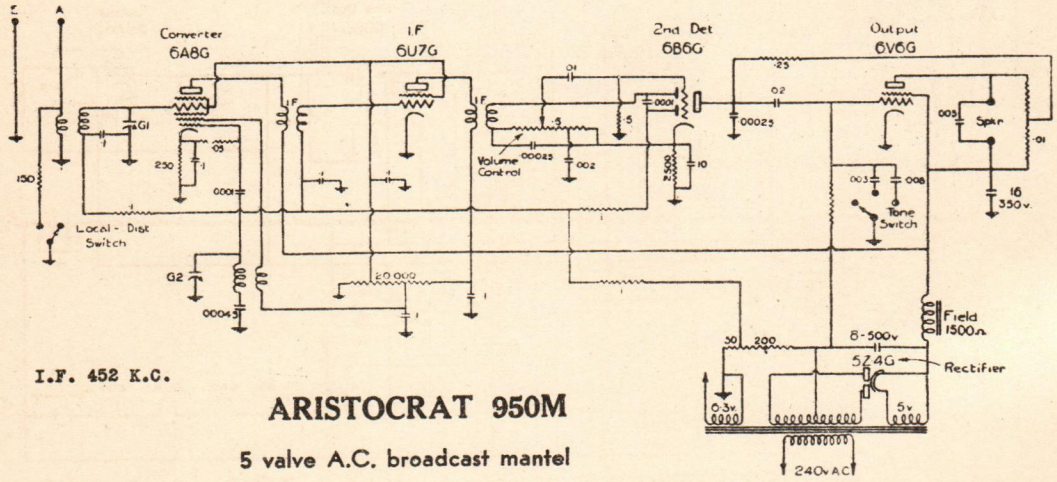
Manufactuerd by Syme E.S.M. Pty. Ltd., 17 Glebe Street, Glebe, N.S.W.



I.F. 452 K.C.

ARISTOCRAT 950

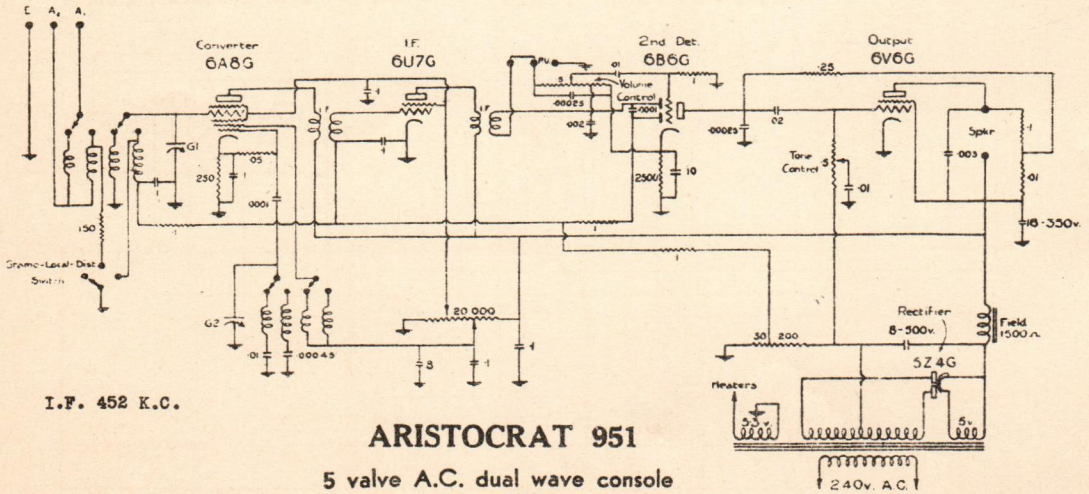
5 valve A.C. broadcast console



I.F. 452 K.C.

ARISTOCRAT 950M

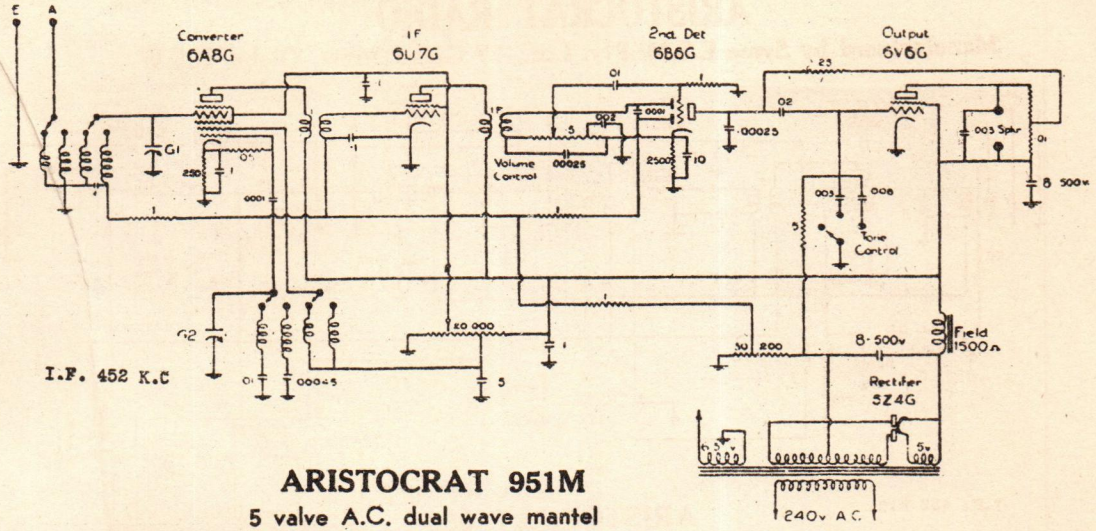
5 valve A.C. broadcast mantel



I.F. 452 K.C.

ARISTOCRAT 951

5 valve A.C. dual wave console

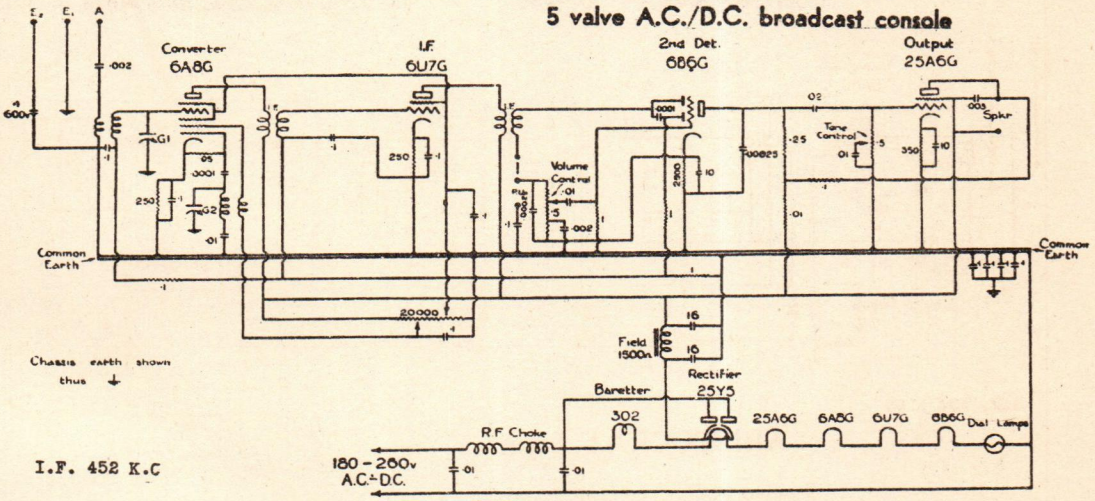


ARISTOCRAT 951M

5 valve A.C. dual wave mantel

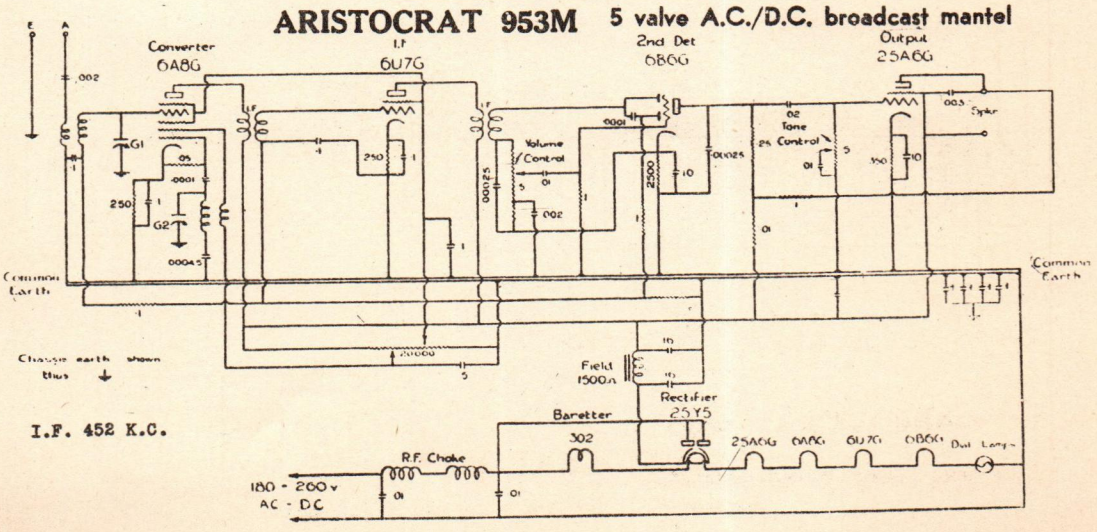
ARISTOCRAT 953

5 valve A.C./D.C. broadcast console



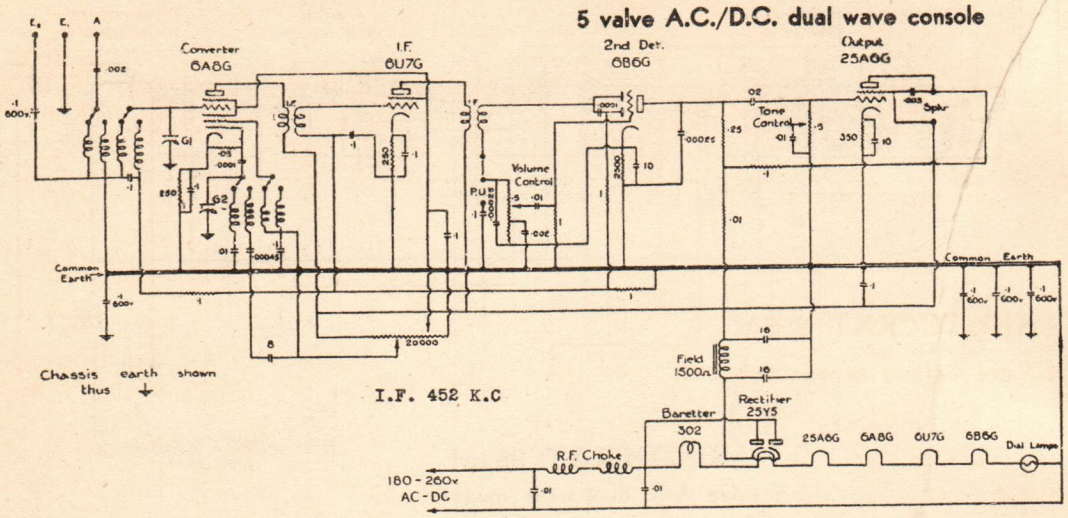
ARISTOCRAT 953M

5 valve A.C./D.C. broadcast mantel



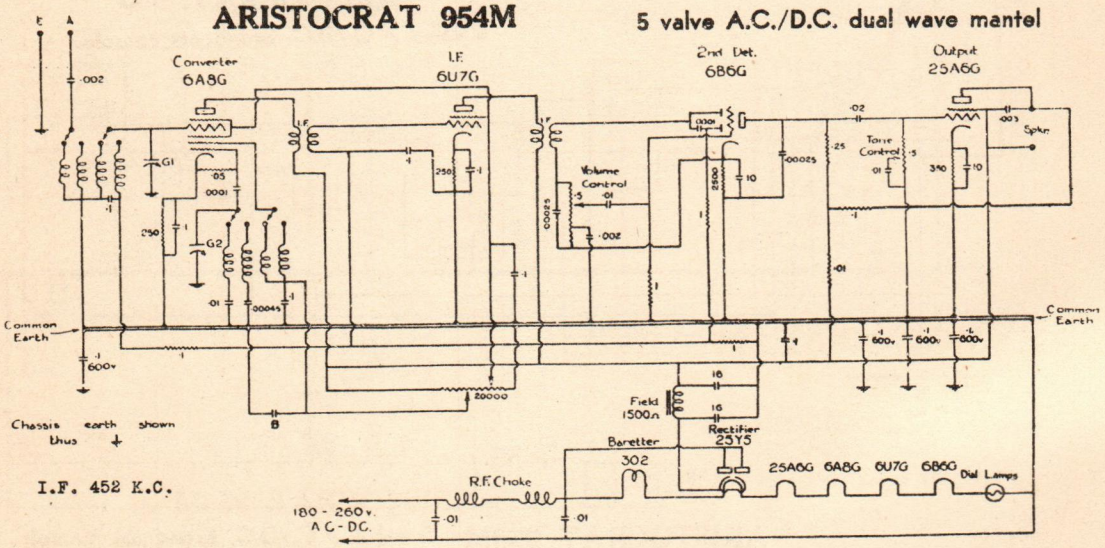
ARISTOCRAT 954

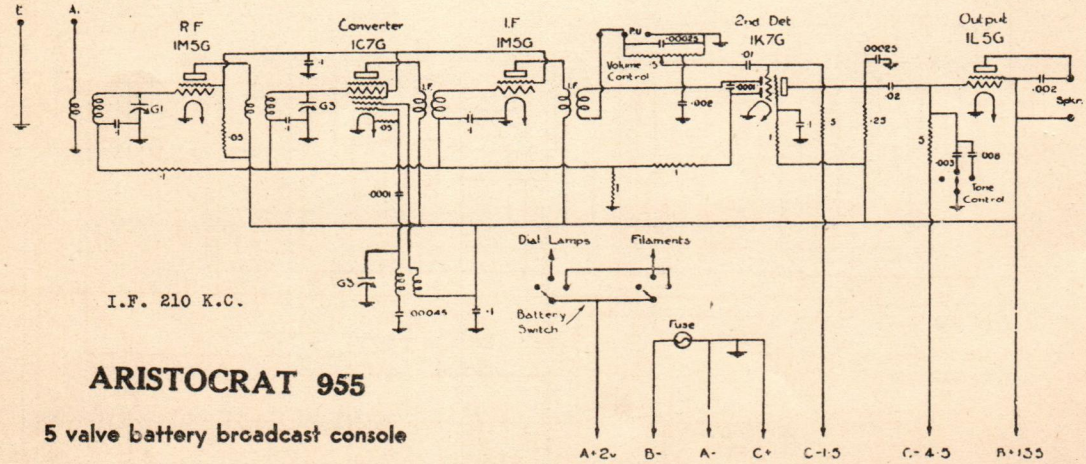
5 valve A.C./D.C. dual wave console



ARISTOCRAT 954M

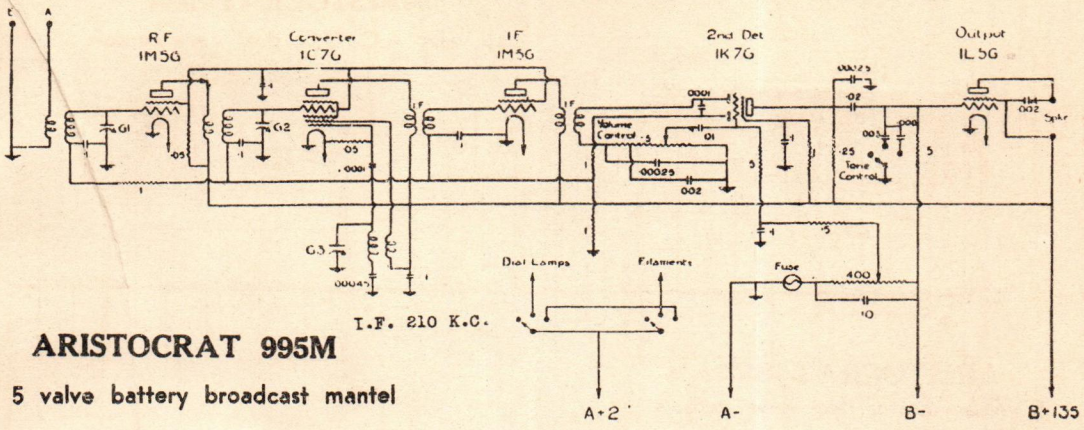
5 valve A.C./D.C. dual wave mantel





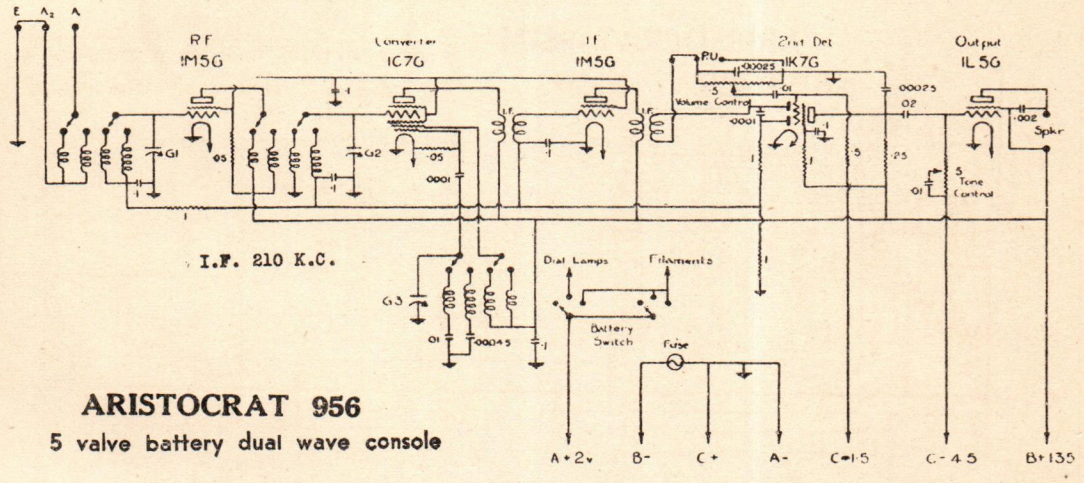
ARISTOCRAT 955

5 valve battery broadcast console



ARISTOCRAT 995M

5 valve battery broadcast mantel

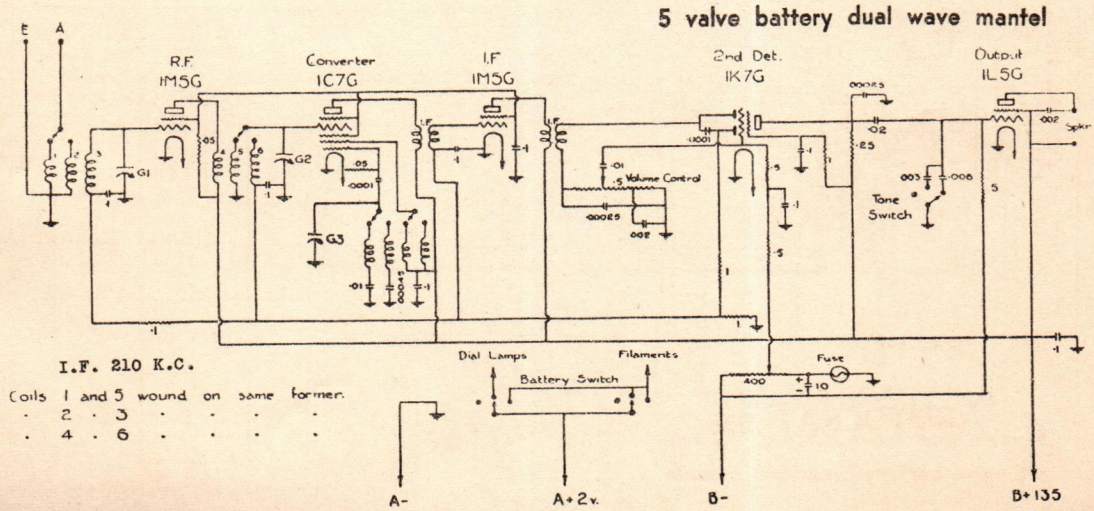


ARISTOCRAT 956

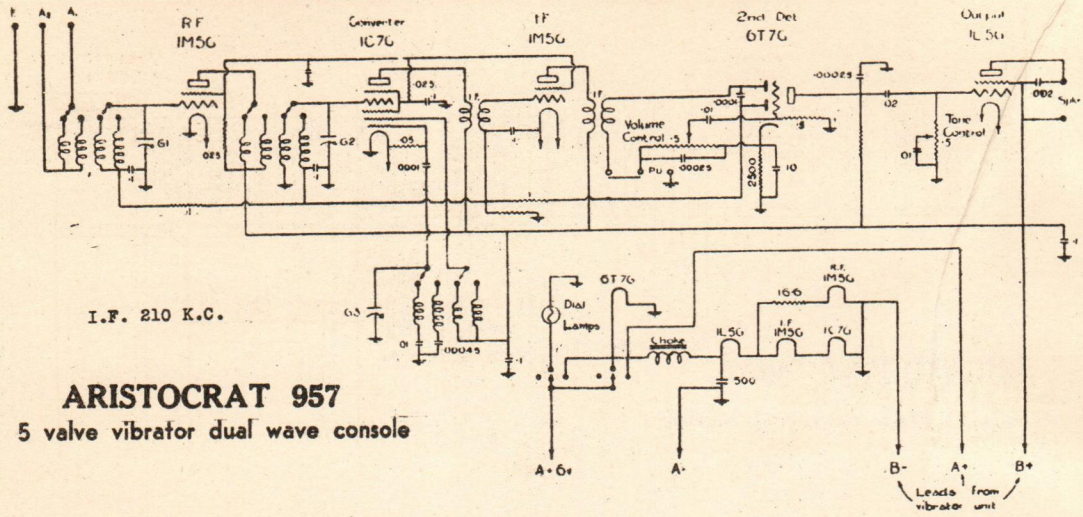
5 valve battery dual wave console

ARISTOCRAT 956M

5 valve battery dual wave mantel



Coils 1 and 5 wound on same former.
. 2 . 3 . . . .
. 4 . 6 . . . .

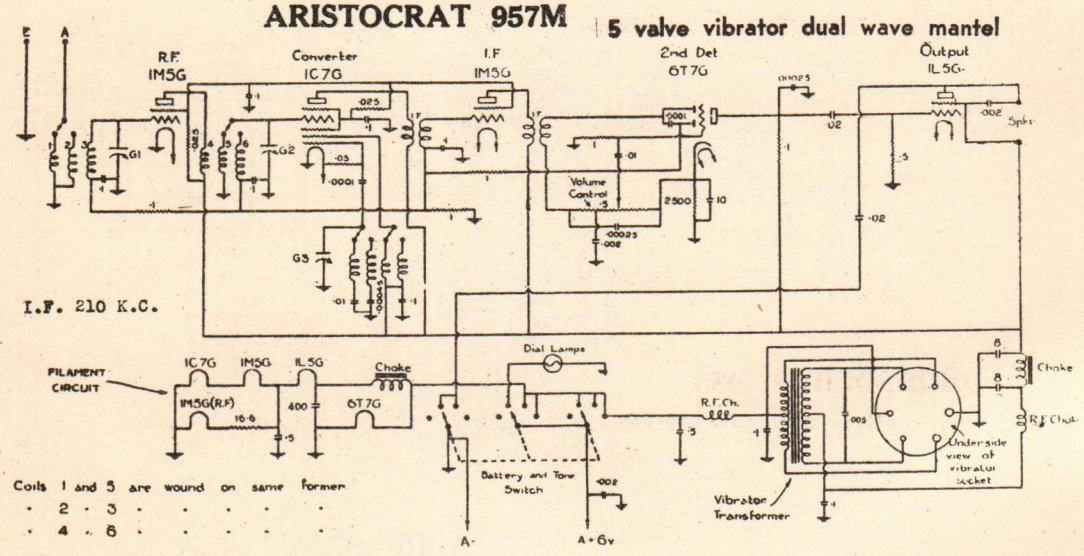


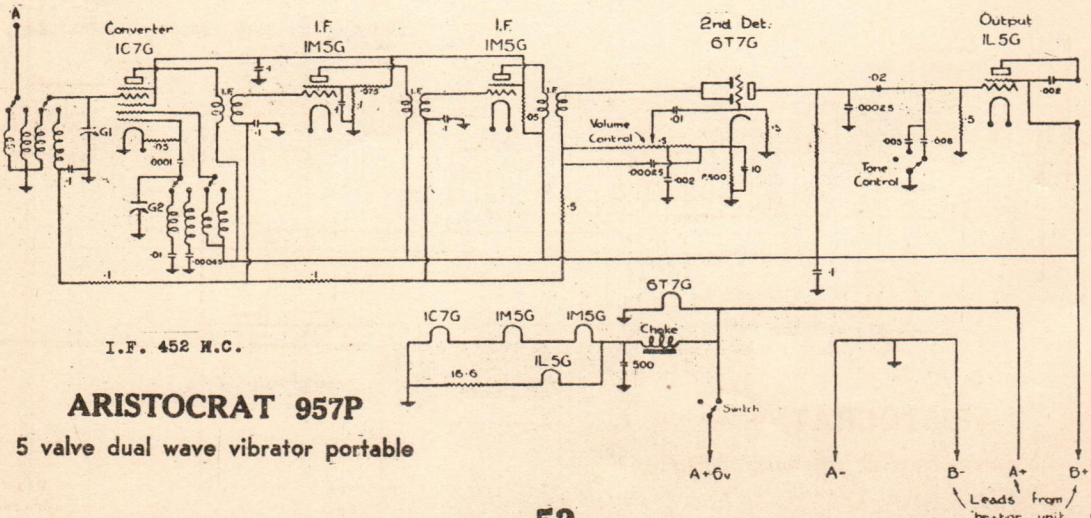
ARISTOCRAT 957

5 valve vibrator dual wave console

ARISTOCRAT 957M

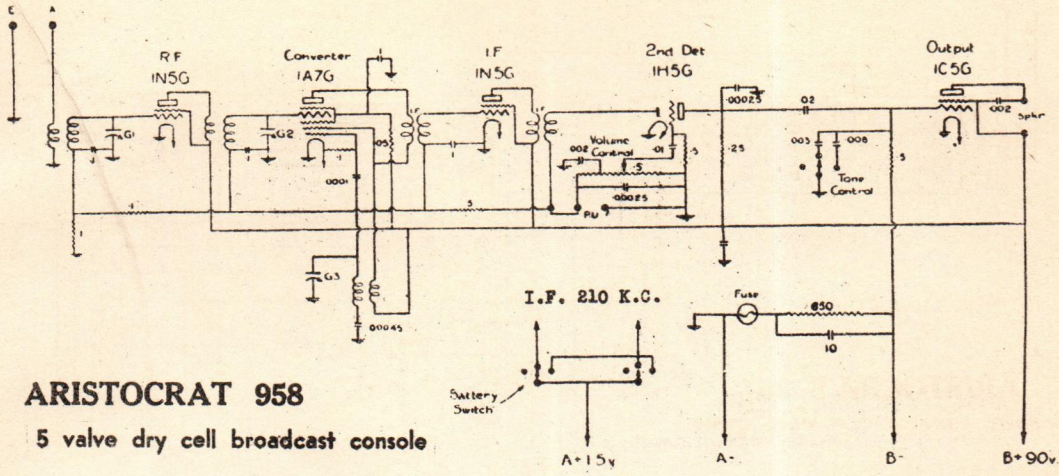
5 valve vibrator dual wave mantel





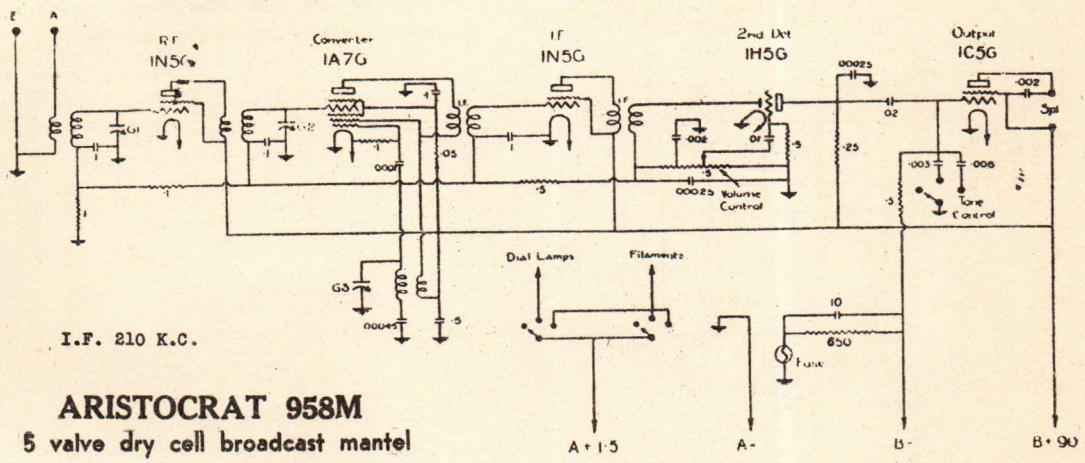
ARISTOCRAT 957P

5 valve dual wave vibrator portable



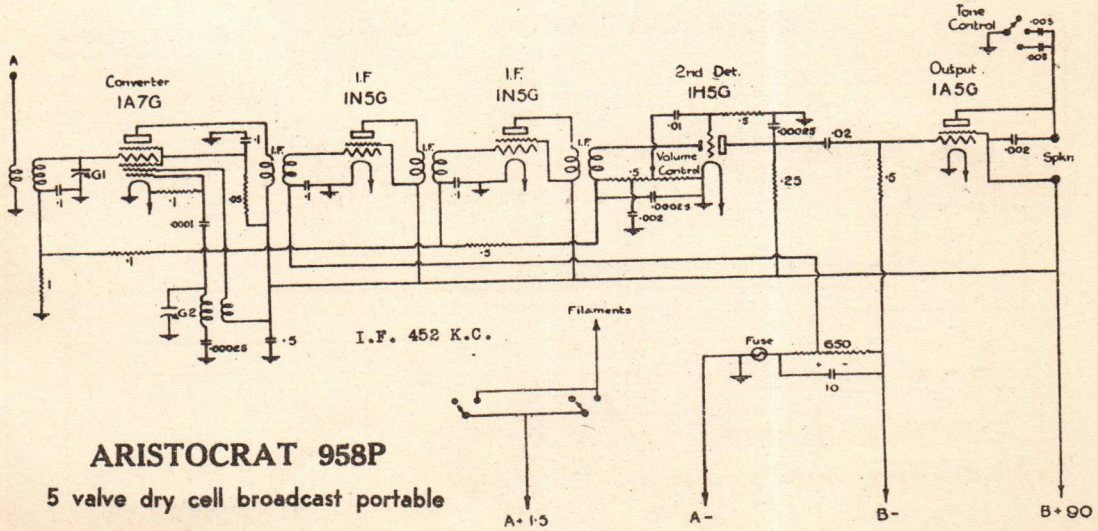
ARISTOCRAT 958

5 valve dry cell broadcast console



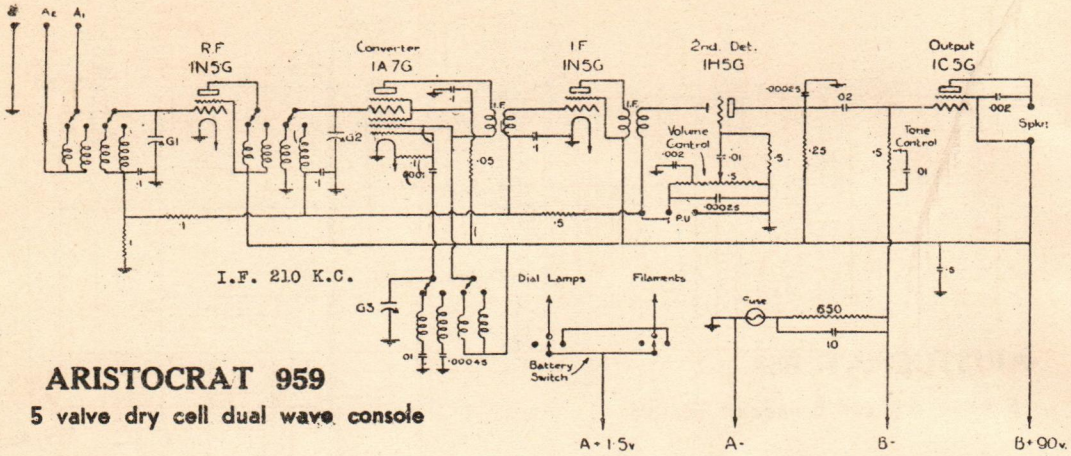
ARISTOCRAT 958M

5 valve dry cell broadcast mantel



ARISTOCRAT 958P

5 valve dry cell broadcast portable

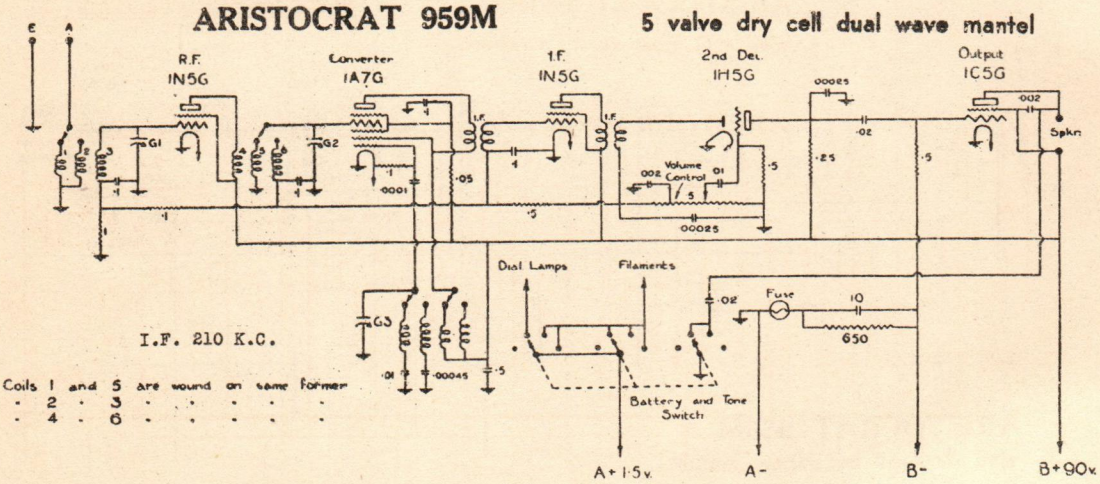


ARISTOCRAT 959

5 valve dry cell dual wave console

ARISTOCRAT 959M

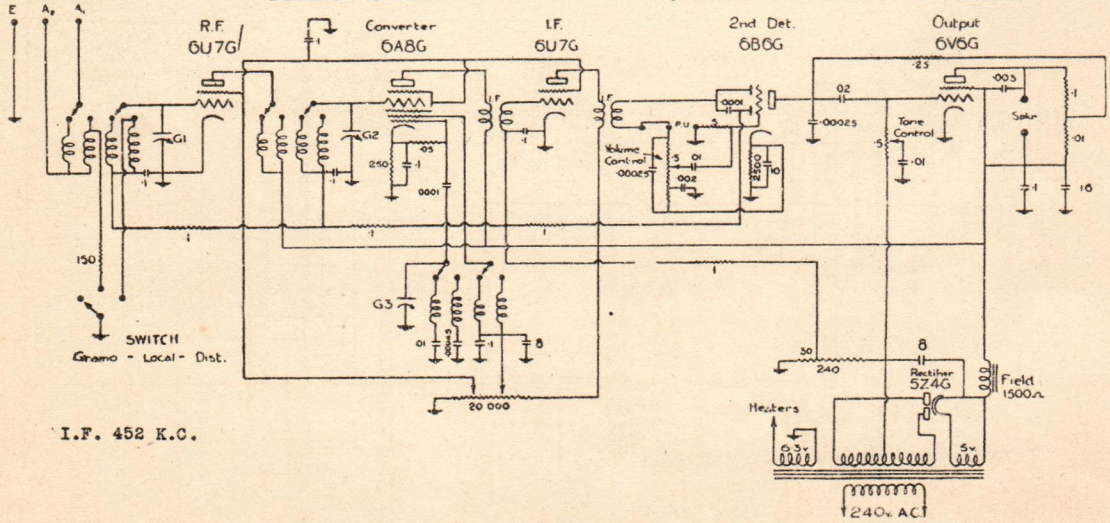
5 valve dry cell dual wave mantel



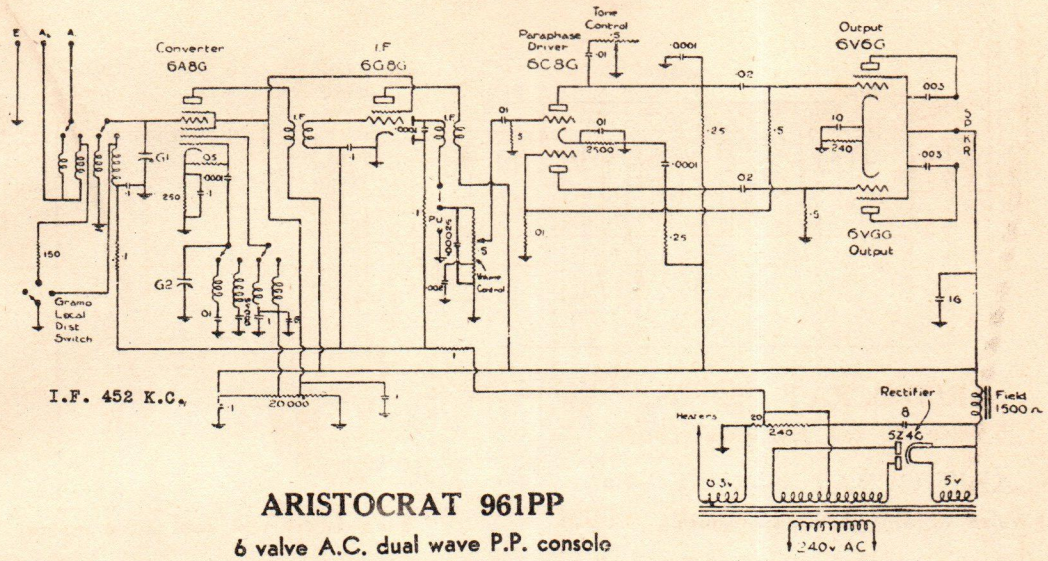
Coils 1 and 5 are wound on same former
2 . 3
4 . 6

ARISTOCRAT 961

6 valve A.C. dual wave console



I.F. 452 K.C.

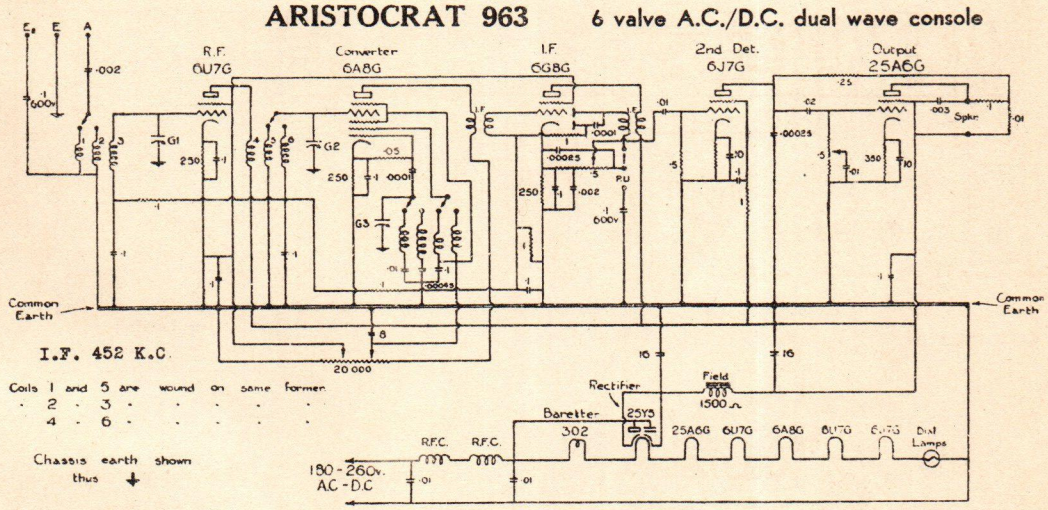


ARISTOCRAT 961PP

6 valve A.C. dual wave P.P. console

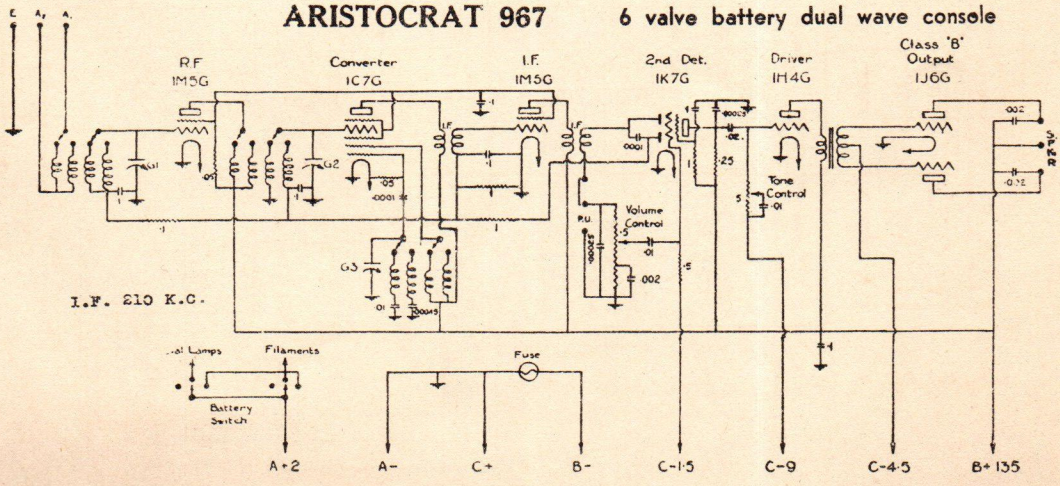
ARISTOCRAT 963

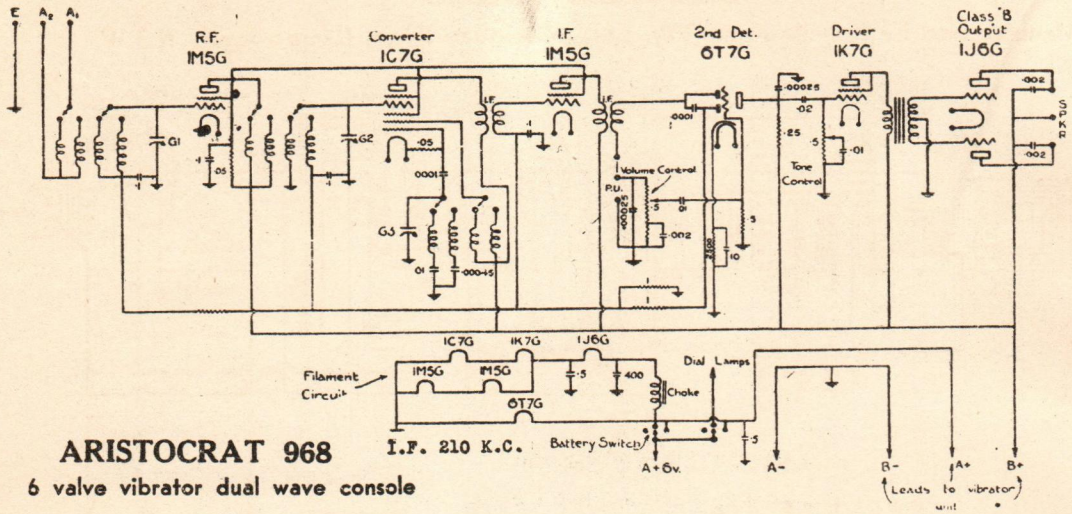
6 valve A.C./D.C. dual wave console



ARISTOCRAT 967

6 valve battery dual wave console

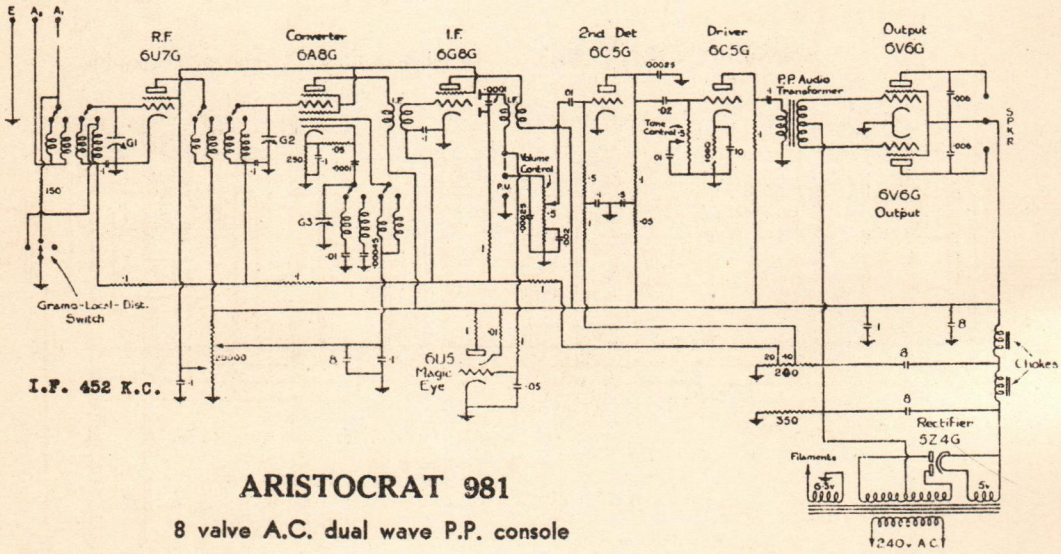




ARISTOCRAT 968

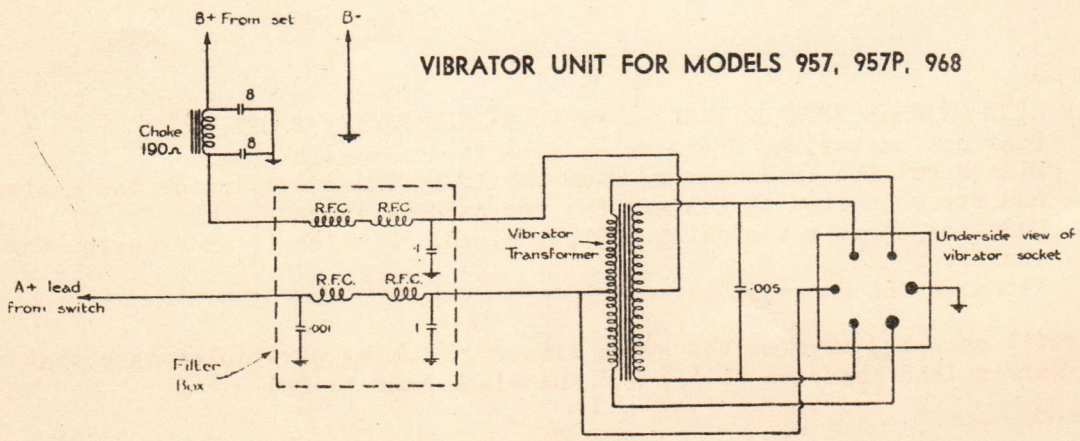
I.F. 210 K.C.

6 valve vibrator dual wave console



ARISTOCRAT 981

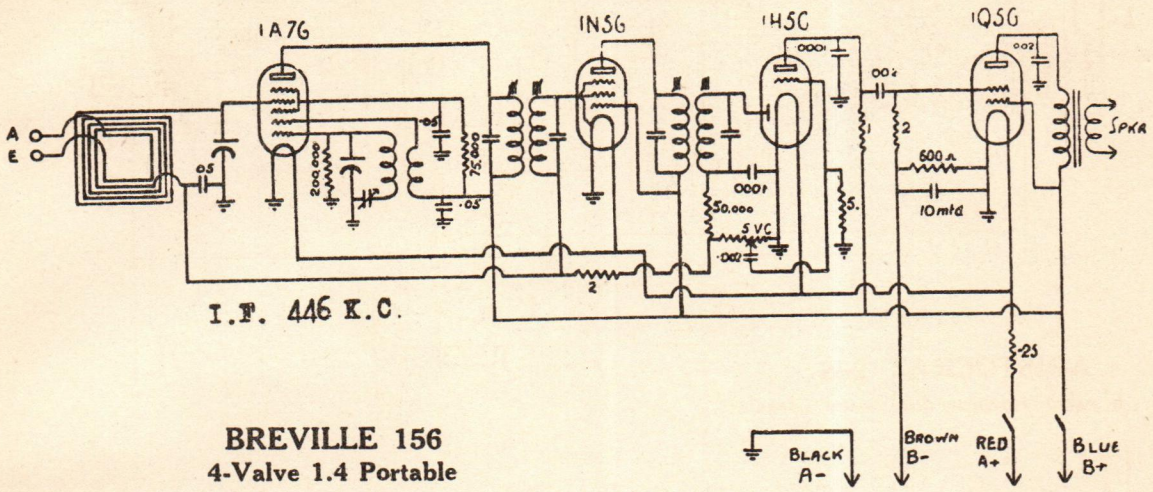
8 valve A.C. dual wave P.P. console



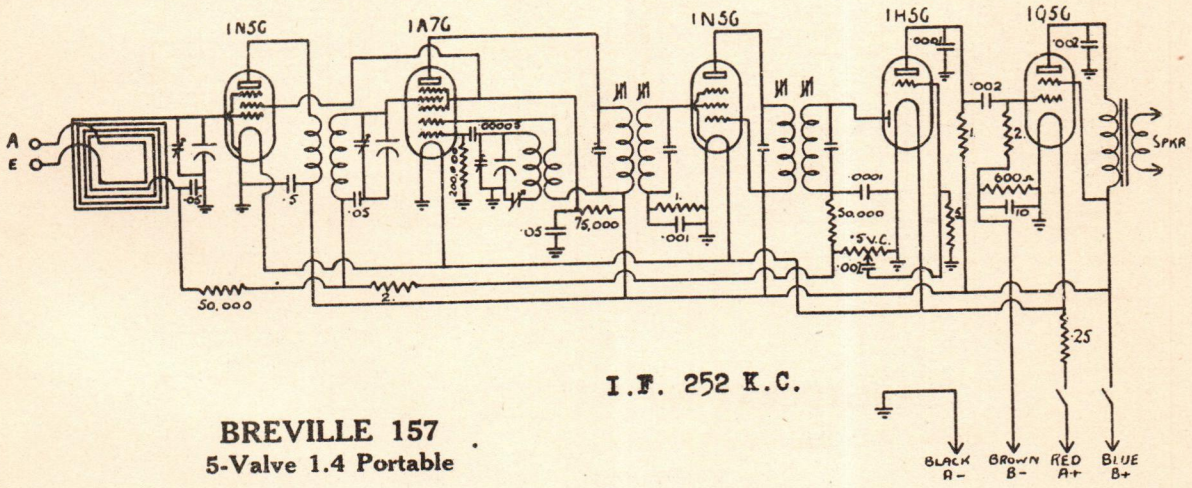
VIBRATOR UNIT FOR MODELS 957, 957P, 968

BREVILLE RADIO

Manufactured by Breville Radio Pty. Ltd., Missenden Road, Camperdown, N.S.W.



BREVILLE 156
4-Valve 1.4 Portable



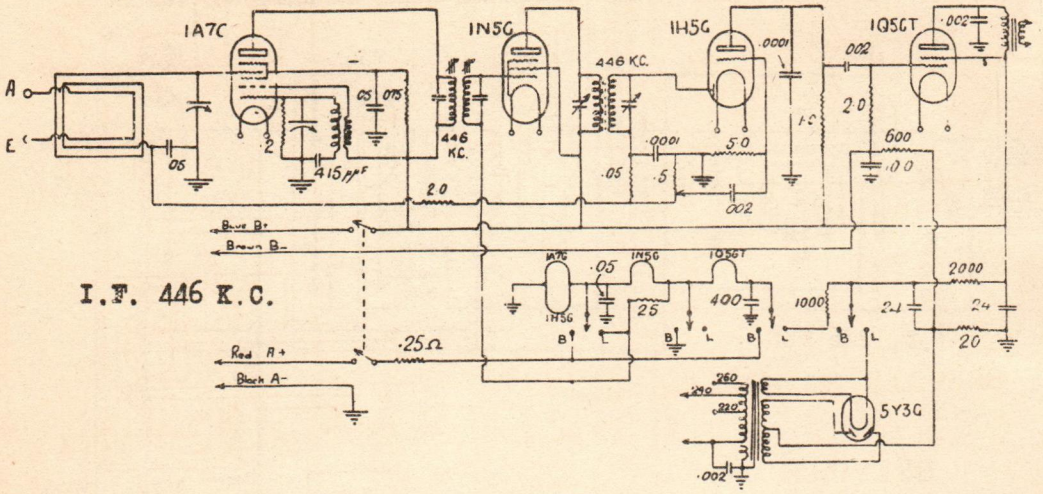
BREVILLE 157
5-Valve 1.4 Portable

TO REMOVE CHASSIS FROM CABINET. - FIRST SWITCH RECEIVER OFF.

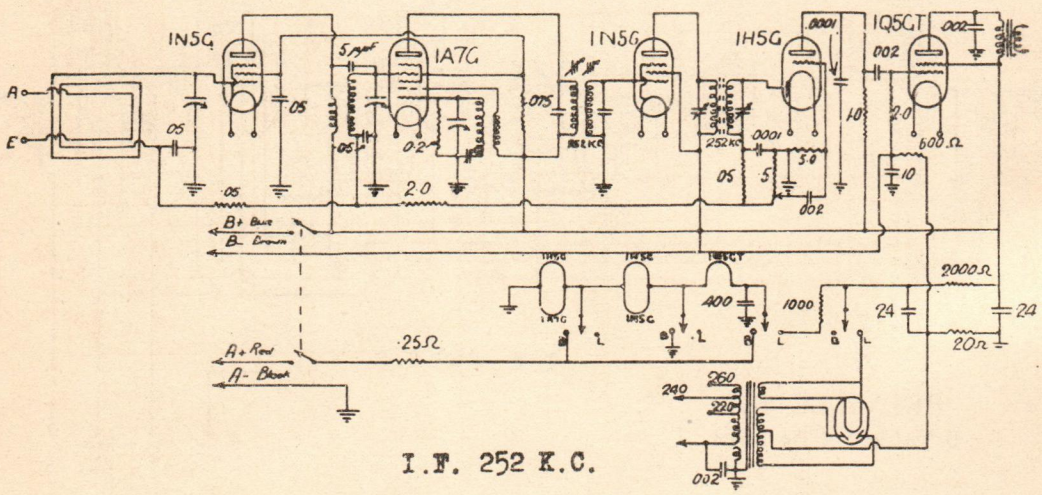
(1) Draw out batteries. There is no need to disconnect them.
(2) Disconnect the leads coming from the loop, these are inside the cabinet and are connected to (1) and (2) see chassis above.
(3) Undo the chassis fastening bolt, the head of which is underneath the shelf.
(4) Withdraw the chassis.

To refit chassis, reverse the above procedure taking particular care that the Maroon lead connects to (1) and the Black lead to (2).

BREVILLE 168—5-Valve 1.4 Portable with Built-in A.C. Unit



BREVILLE 169—5-Valve 1.4 Portable with Built-in A.C. Unit

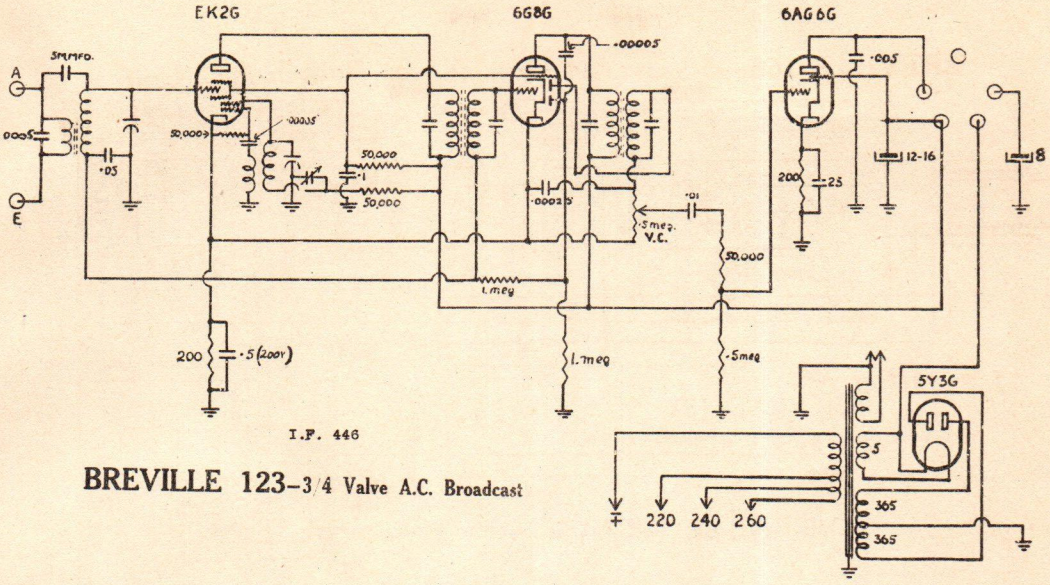


TO REMOVE CHASSIS FROM CABINET -

(1) First switch receiver OFF at the volume control switch and if connected to A.C. mains, switch off at power point, and remove power plug.
(2) Draw out the batteries, disconnection is not necessary.
(3) Disconnect leads from cabinet top to 1 and 2.
(4) Undo the chassis fastening bolts, the heads of which are underneath the shelf.
(5) Withdraw the chassis.

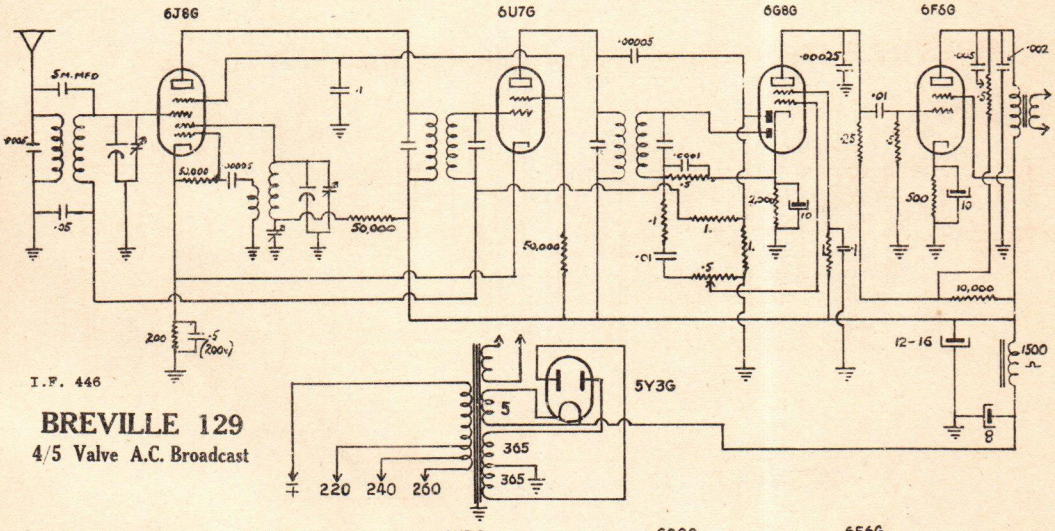
To refit chassis, reverse the above procedure. Take particular care that:-

(6) Maroon lead connects to 1 and Black lead to 2.
(7) Replace asbestos insulation between 5Y3G valve and the PR8 battery.



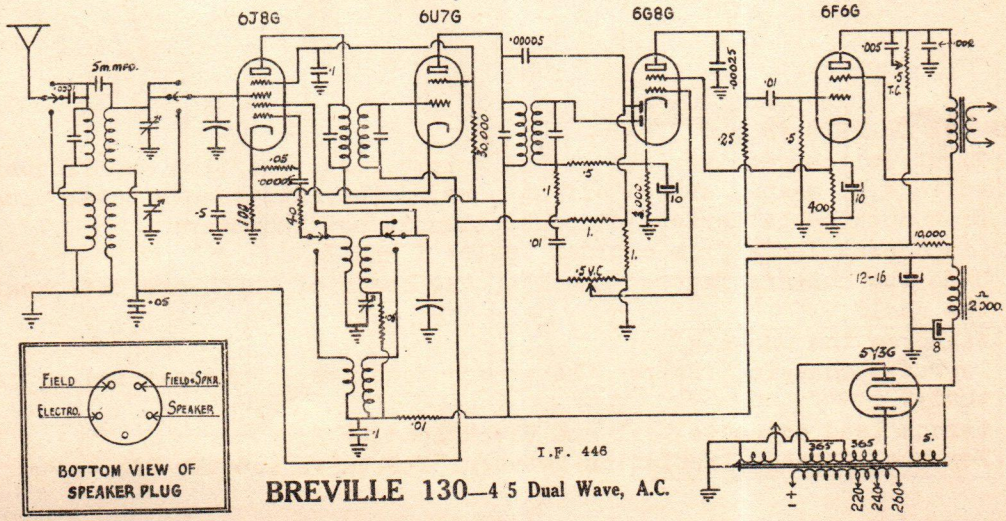
I.F. 446

BREVILLE 123—3/4 Valve A.C. Broadcast



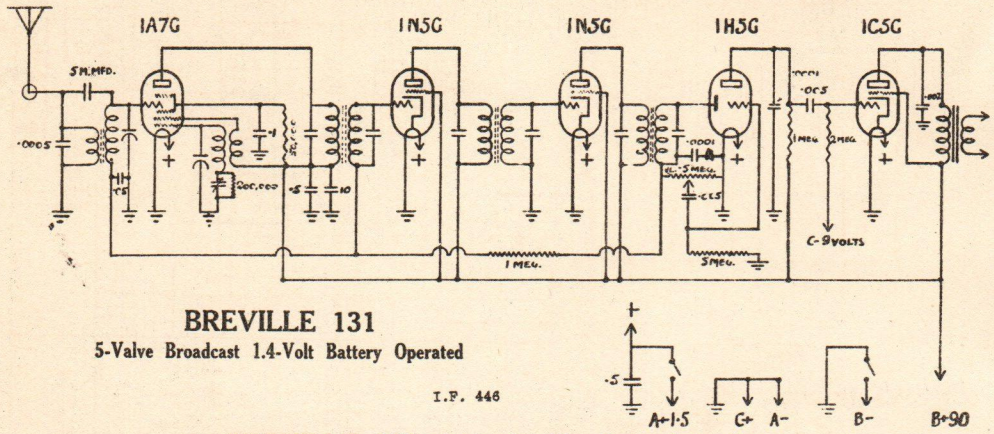
I.F. 446

BREVILLE 129
4/5 Valve A.C. Broadcast



I.F. 446

BREVILLE 130—4 5 Dual Wave, A.C.

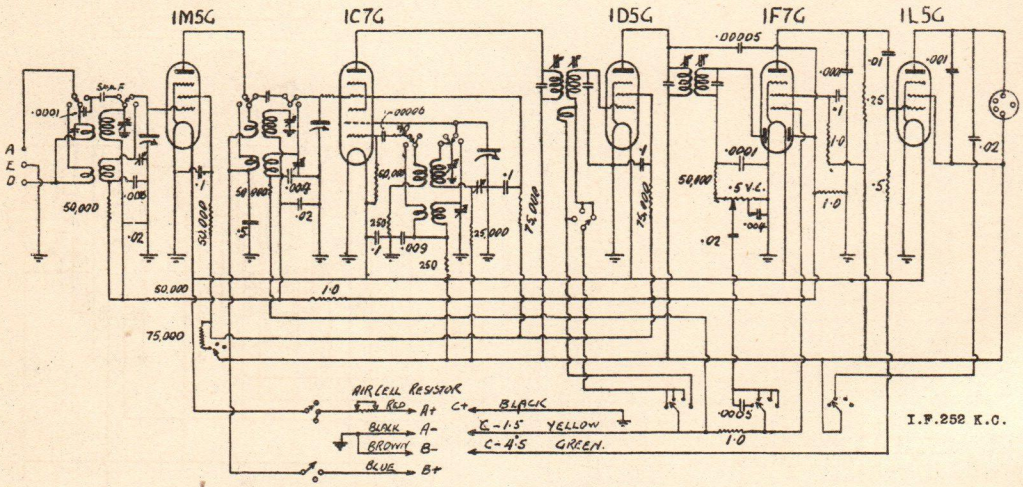


BREVILLE 131

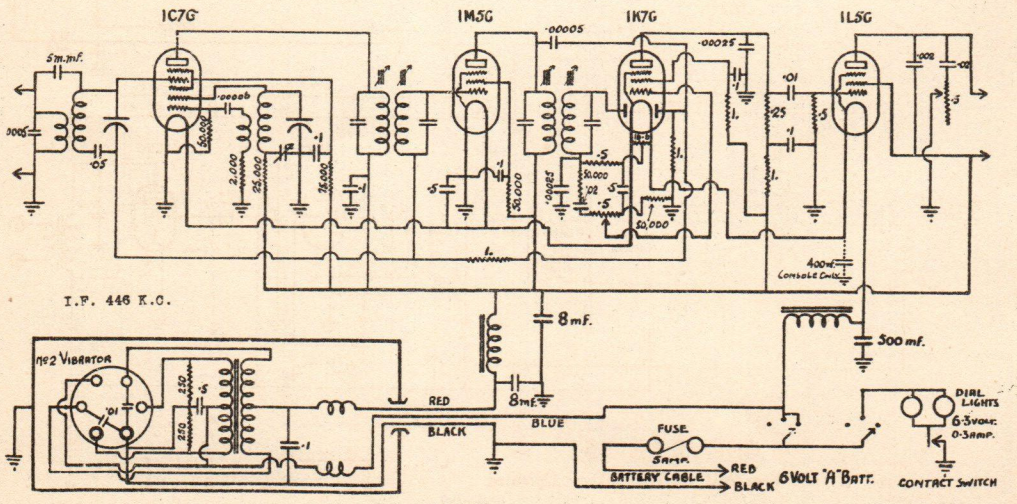
5-Valve Broadcast 1.4-Volt Battery Operated

I.F. 446

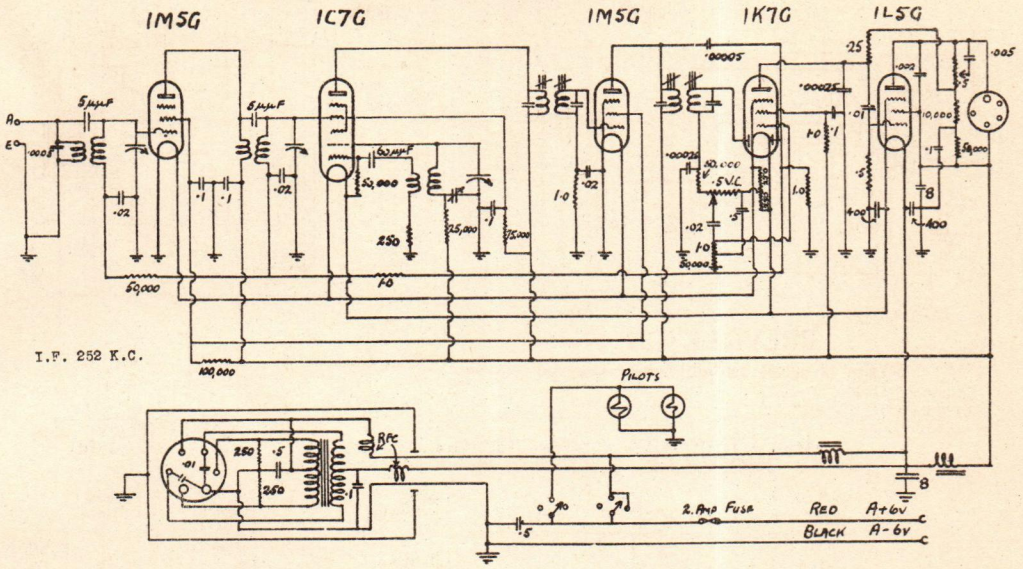
BREVILLE 132—5-Valve Dual Wave Battery Operated



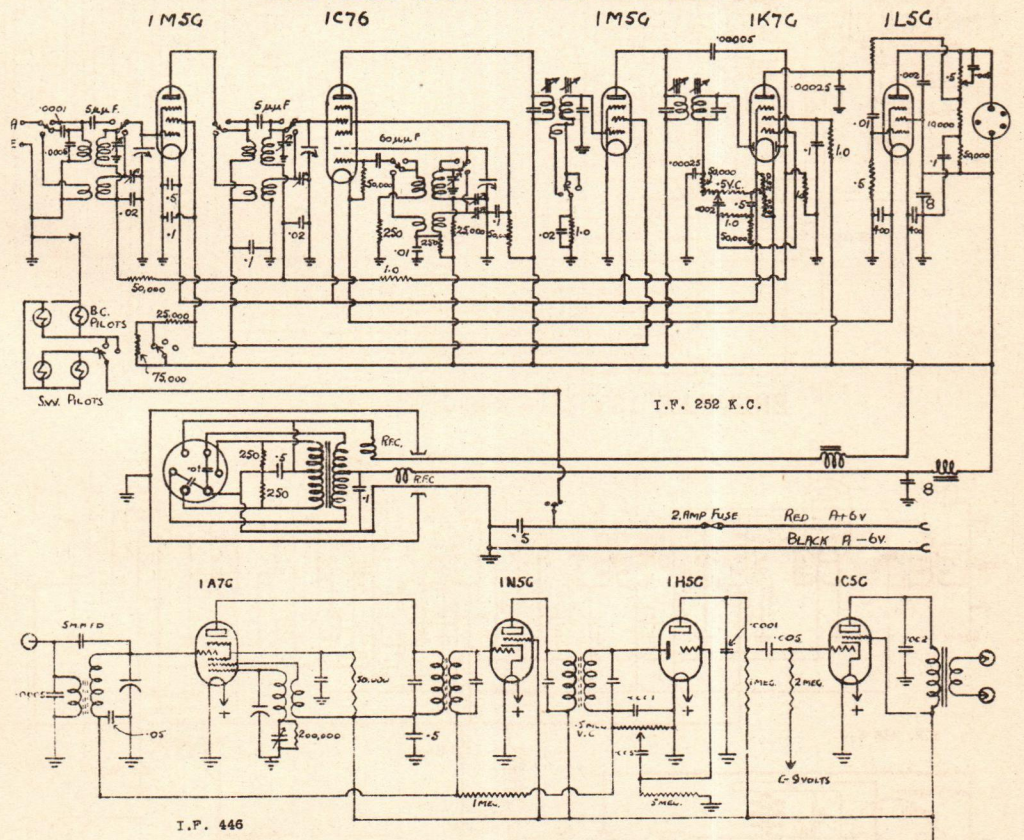
BREVILLE 133—4-Valve Broadcast Vibrator Powered



BREVILLE 135—5-Valve Broadcast Vibrator Powered

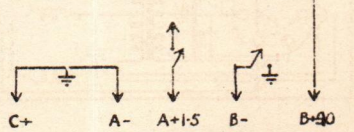


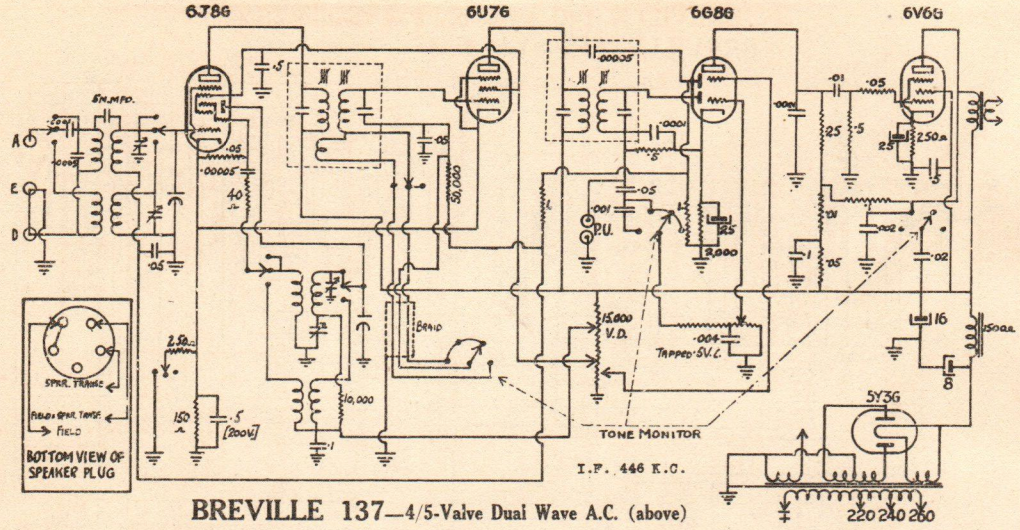
BREVILLE 136—5-Valve Dual Wave Vibrator Powered



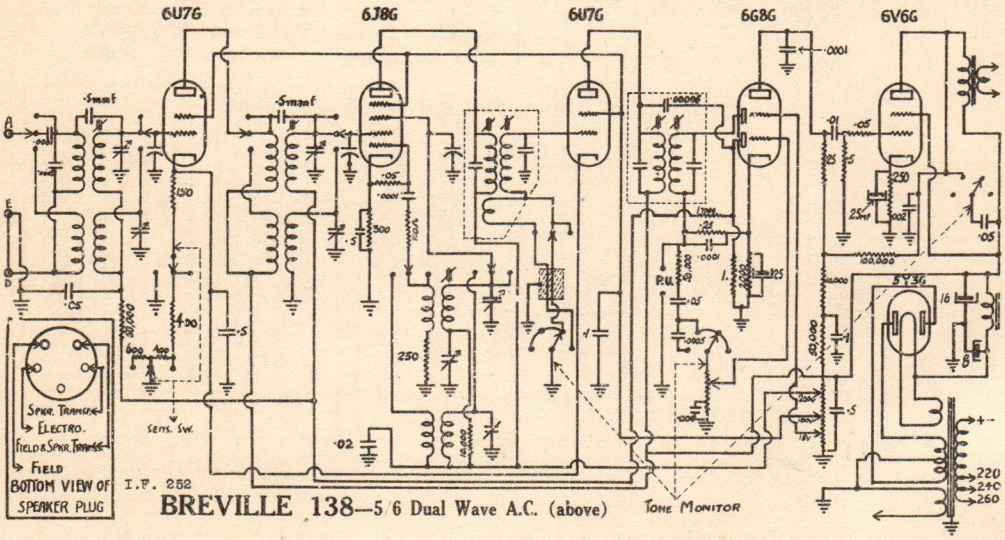
BREVILLE 151

4-Valve Broadcast 1.4-Volt Battery Operated

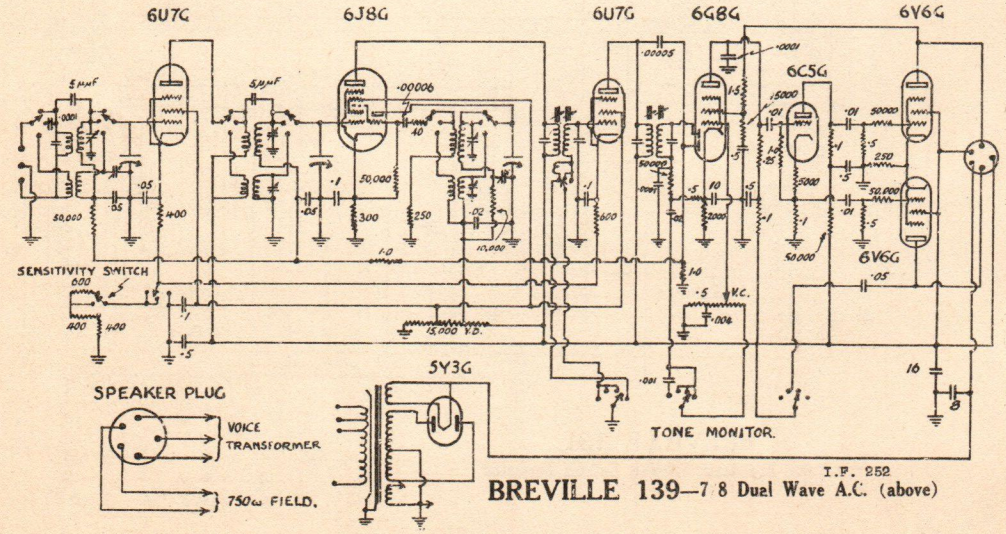




BREVILLE 137—4/5-Valve Dual Wave A.C. (above)

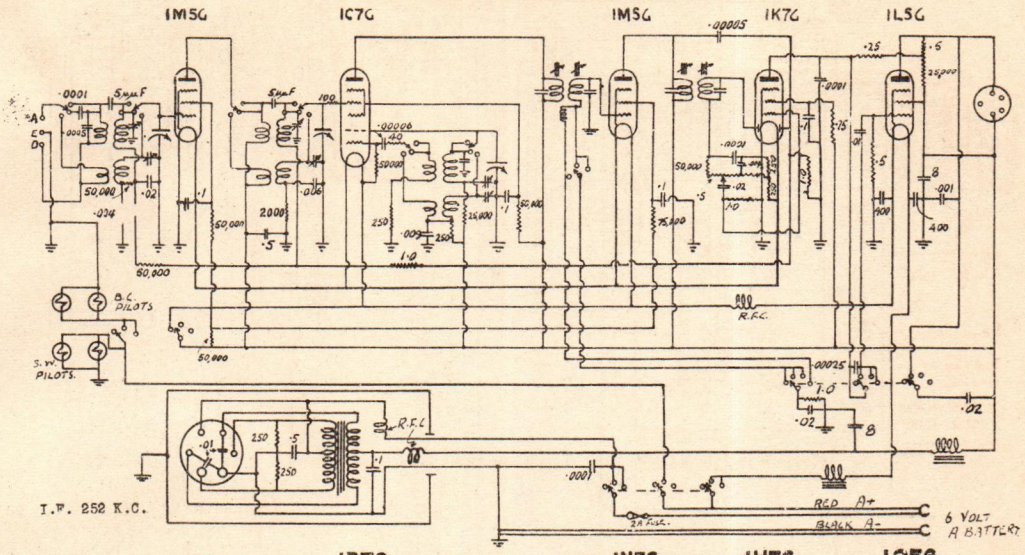


BREVILLE 138—5/6 Dual Wave A.C. (above)



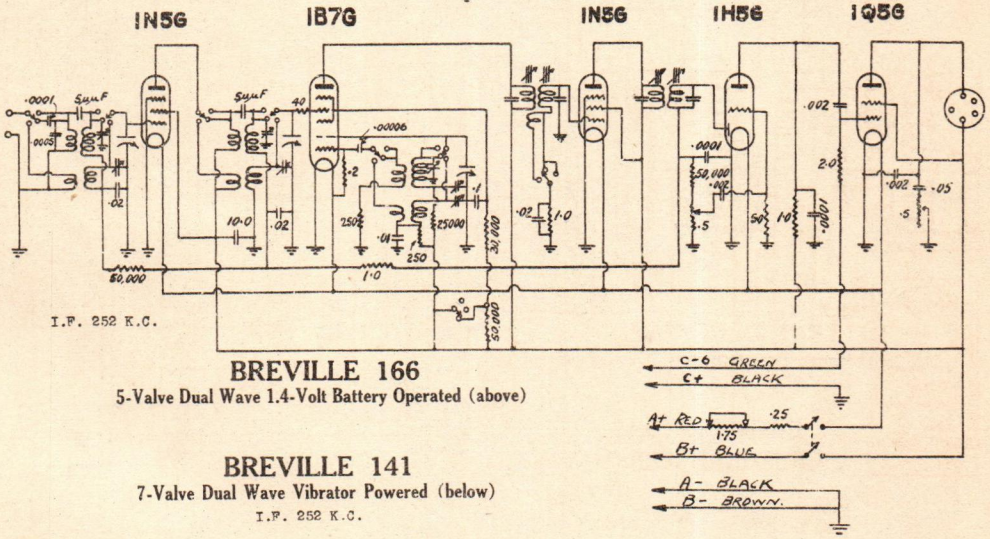
BREVILLE 139—7/8 Dual Wave A.C. (above)

BREVILLE 140—5-Valve Dual Wave Vibrator Powered



BREVILLE 166

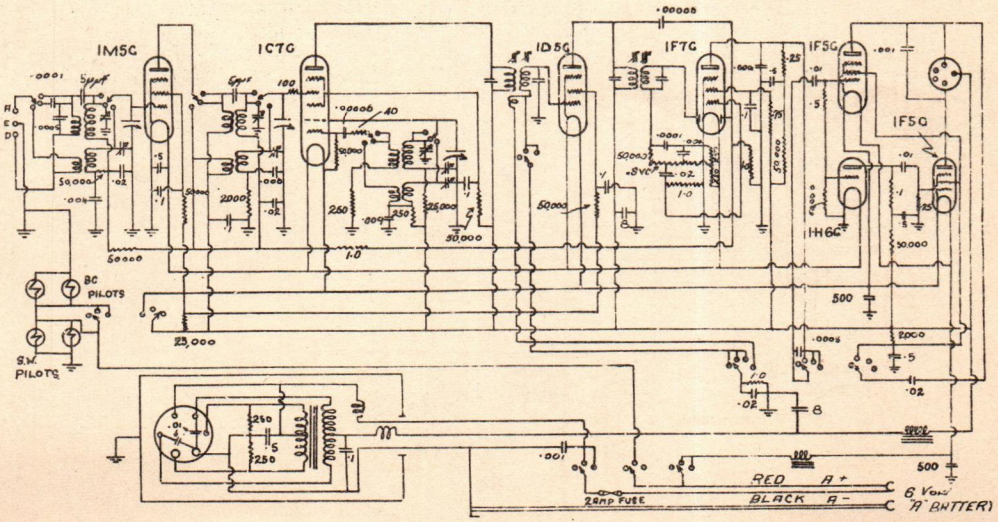
5-Valve Dual Wave 1.4-Volt Battery Operated (above)



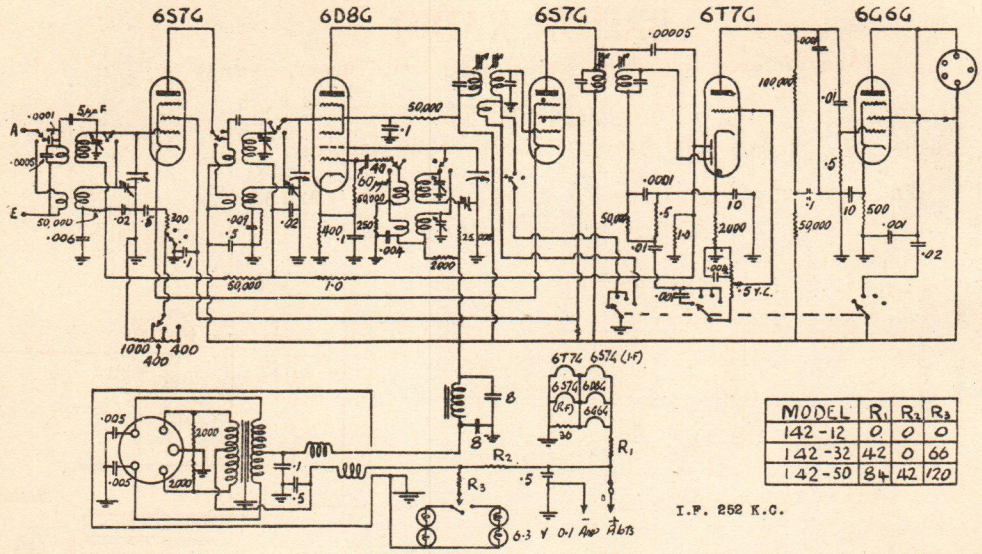
BREVILLE 141

7-Valve Dual Wave Vibrator Powered (below)

I.F. 252 K.C.



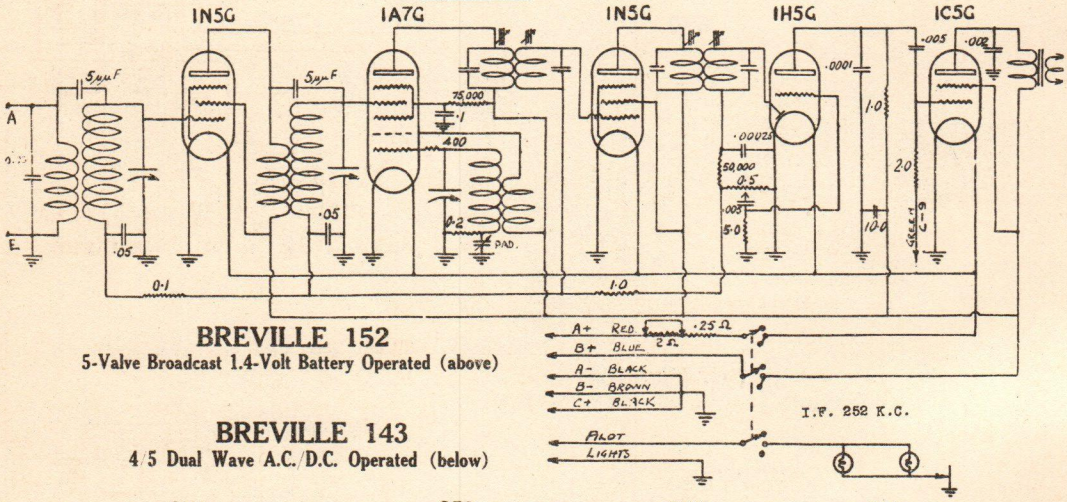
BREVILLE 142—5-Valve Dual Wave Vibrator Powered



MODEL	R_1	R_2	R_3
142-12	0	0	0
142-32	42	0	66
142-50	84	42	120

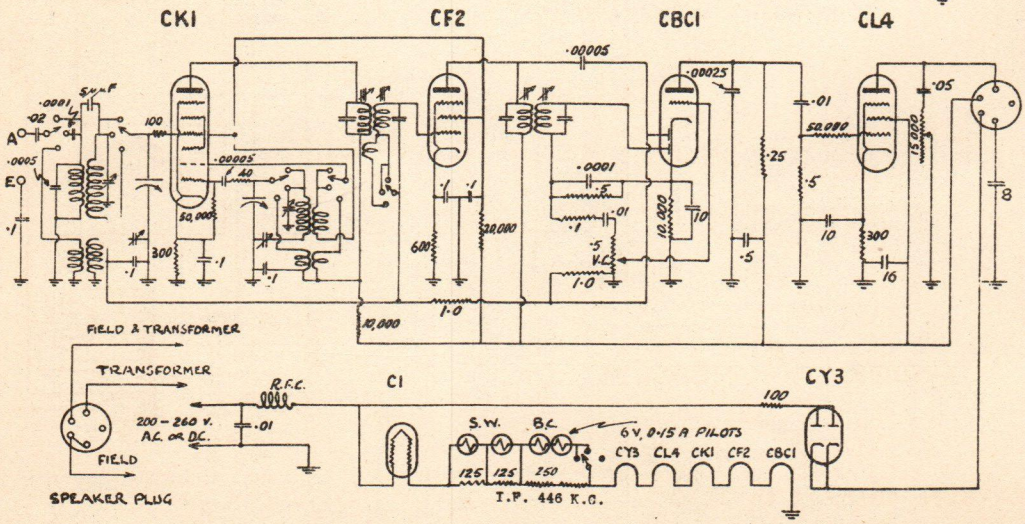
BREVILLE 152

5-Valve Broadcast 1.4-Volt Battery Operated (above)



BREVILLE 143

4/5 Dual Wave A.C./D.C. Operated (below)



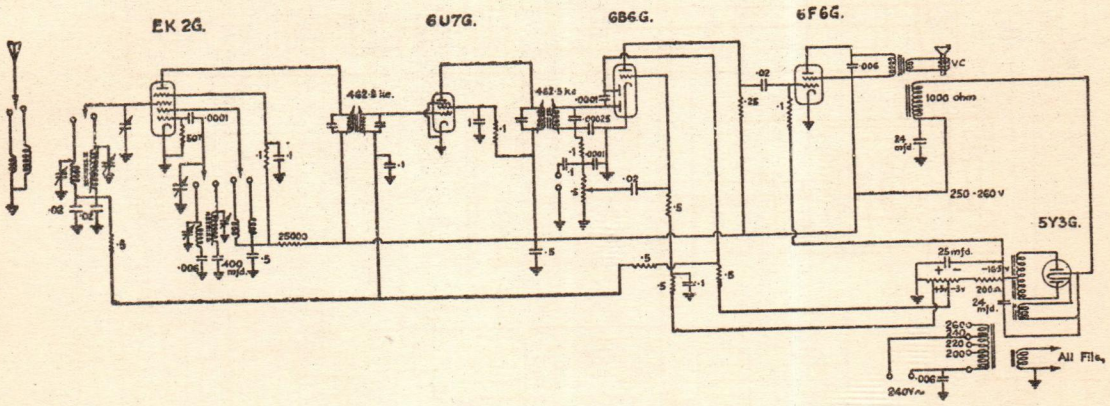
BRITON RADIO

Manufactured by Briton Radio, 369 Kent Street, Sydney

BRITON 30

4/5 Dual Wave A.C. Operated Receiver

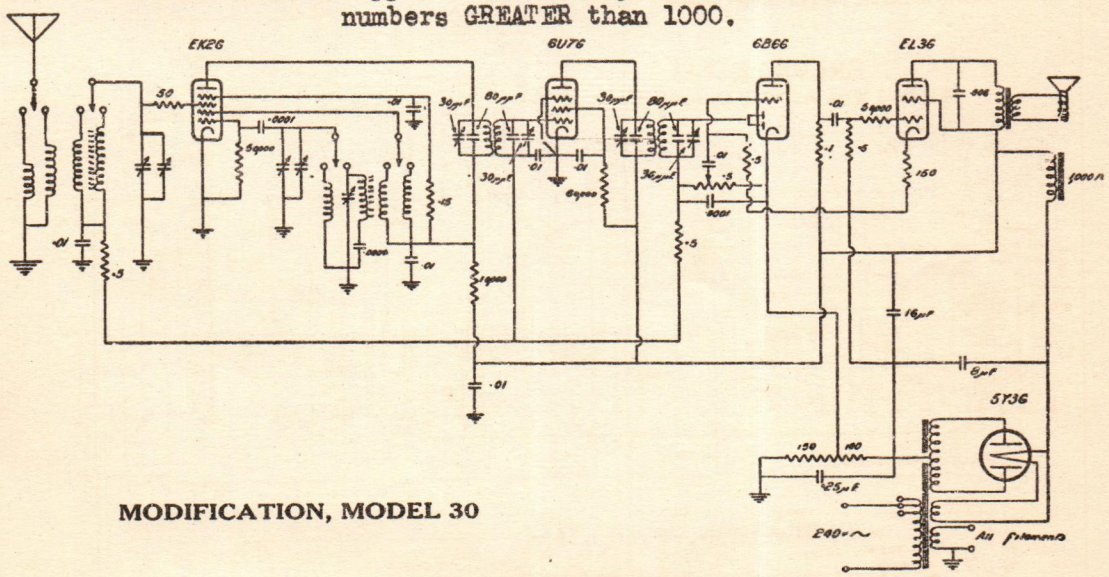
This circuit applies to Model 30 with serial numbers UNDER 1000.



I.F. 462.5 K.C. SPEAKER: 1000 ohm field.
VALVES: EK2G Convertor, 6U7G I.F. 6B6G det. 6F6 output. 5Y3G rectifier.
COVERAGE: Broadcast = 1660 to 550 K.C. Short Wave = 12.5 to 42 metres.

BRITON 30 MODIFICATION

This circuit applies to Model 30 with serial numbers GREATER than 1000.



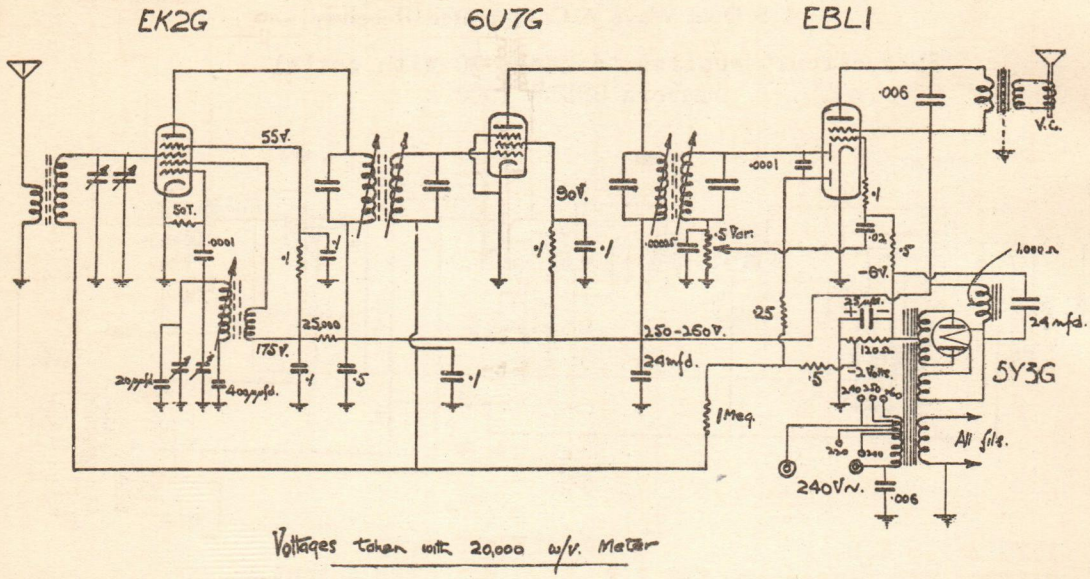
MODIFICATION, MODEL 30

Output valve changed to EL3G

BRITON 31

3/4 Broadcast A.C. Operated Receiver

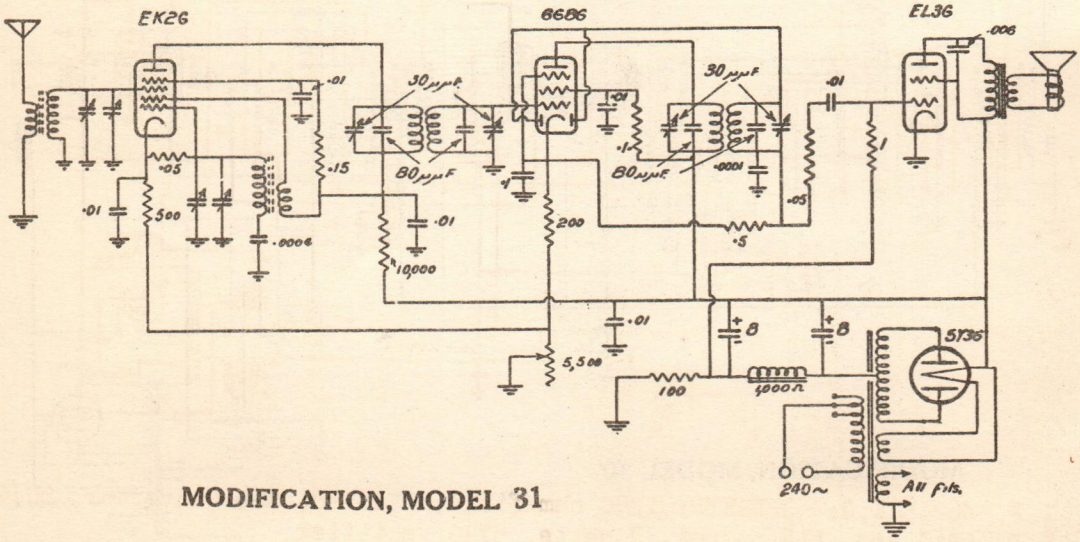
This circuit applies to Model 31 with serial numbers UNDER 500



I.F. 462.5 K.C. SPEAKER: 1000 ohm field.
VALVES: EK2G Convertor. 6U7G I.F. EBL1 det. & output. 5Y3G rectifier.
COVERAGE: 1660 to 550 K.C.

BRITON 31 (MODIFICATION)

This circuit applies to Model 31 with serial numbers GREATER than 500.

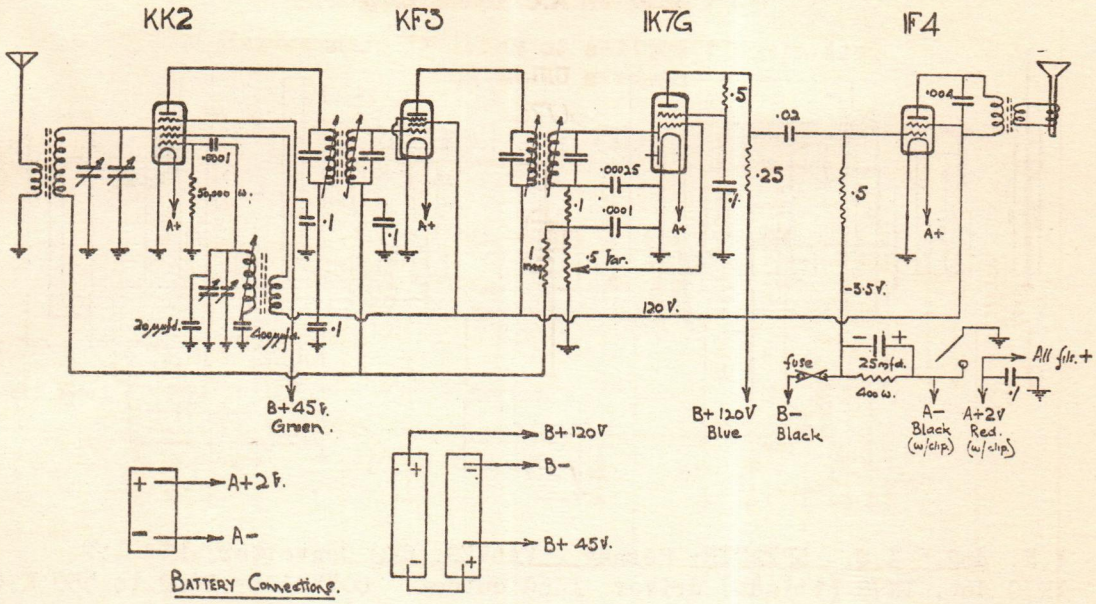


MODIFICATION, MODEL 31

VALVES: EK2G Convertor. 6G8G I.F. & det. EL3G output. 5Y3G rectifier.

BRITON 32

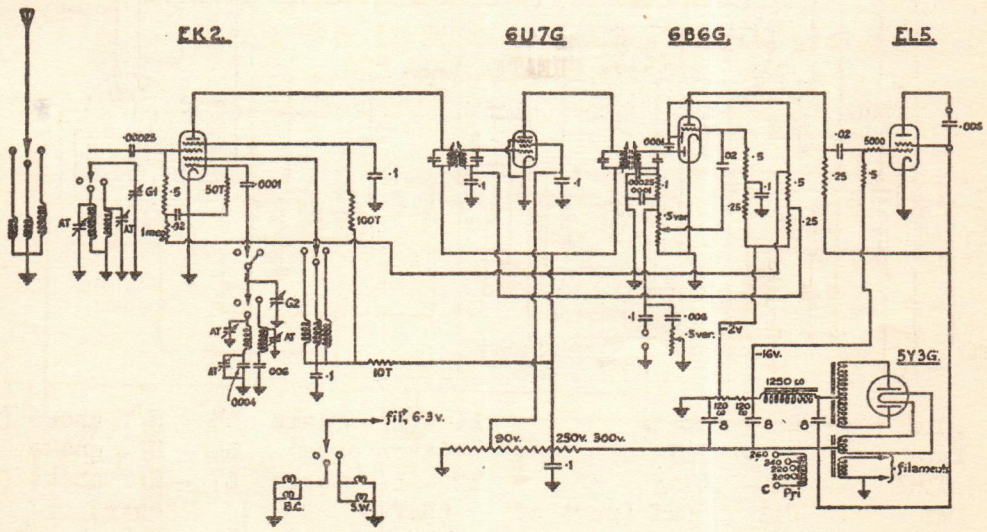
4-Valve Broadcast Battery Operated Receiver



I.F. 462.5 K.C. SPEAKER: Permag.
VALVES: KK2 Convertor. KF3 I.F. 1K7G det. 1F4 output.
COVERAGE: 1660 to 550 K.C.

BRITON 33

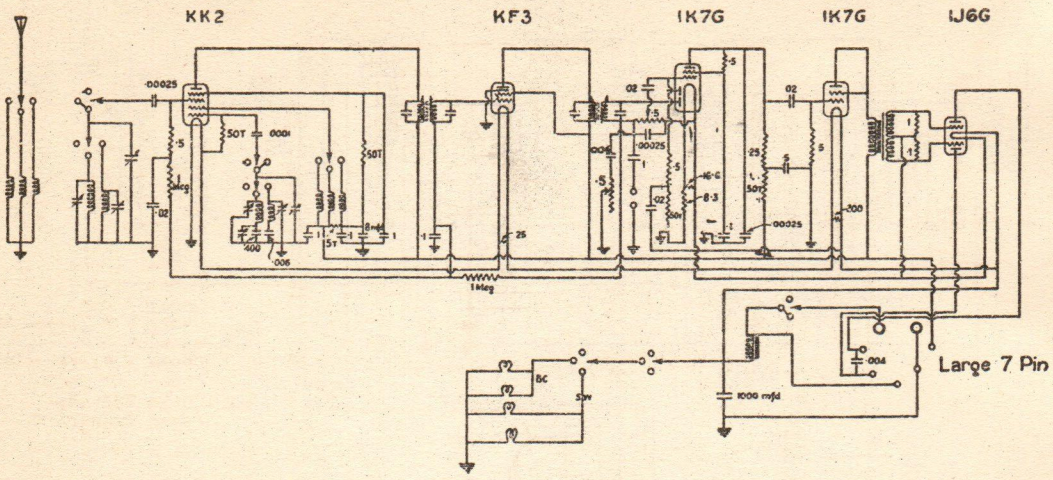
4/5 Dual Wave A.C. Operated Receiver



I.F. 462.5 K.C. SPEAKER: 1250 ohm field. VALVES: EK2 Convertor. 6U7G - I.F. 6B6G det. EL5 output, 7 watts. 5Y3G rectifier.
COVERAGE: 1500-550 K.C. and 16 to 43 metres. TONE CONTROL at rear of chassis. Voltages measured with 20,000 ohm per volt meter.

BRITON 34

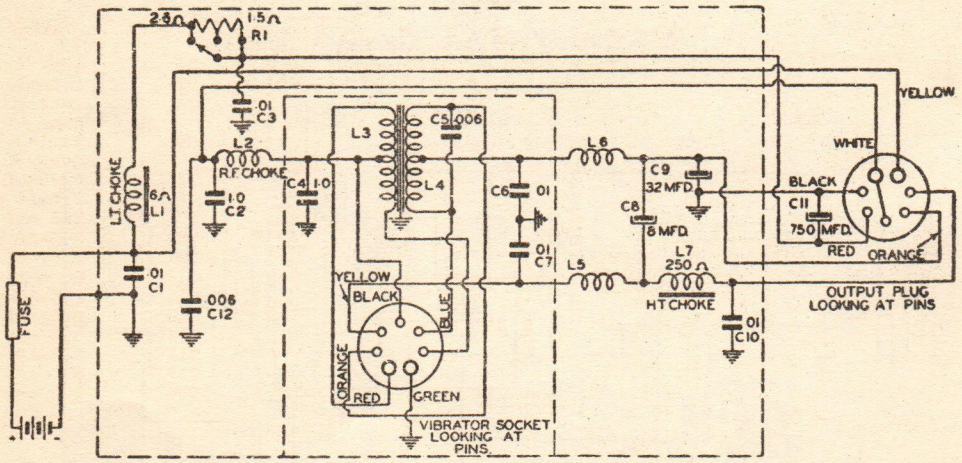
5-Valve Dual Wave Vibrator Powered Receiver



I.F. 462.5 K.C. SPEAKER: Permag. VALVES: KK2 Convertor. KF3 I.F. 1K7G det. 1K7G (triode) driver. 1J6G output. COVERAGE: 1500 to 550 K.C. and 16 to 43 metres. CONSUMPTION: (without dial lights) 1.1 amps.

BRITON B30

6-Volt Vibrator Unit



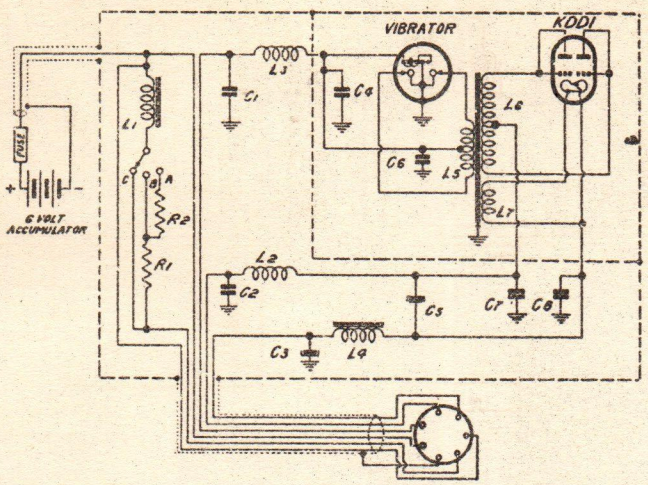
C1 - .01mf
C2 - 1mf
c3 - .01mf
C4 - 1mf
C5 - .006mf
C6 - .01mf
C7 - .01mf
C8 - 8mf
C9 - 32mf
C10- .01mf
C11- 750mf (part of input cable
C12- .006mf.
L1 - L/t Choke (iron core)
L2 - L/T Choke (R.F.)
L3,L4 - Power Transformer
L5 - H/T choke (R.F.
L6 - H/T choke "
L7 - H/T choke (iron core)
R1 - 2.5 plus 1.5 ohm

CONSUMPTION: 1 amp. at 6 volts.

FOR USE WITH BRITON MODELS B349,B440,B540.

BRITON B49

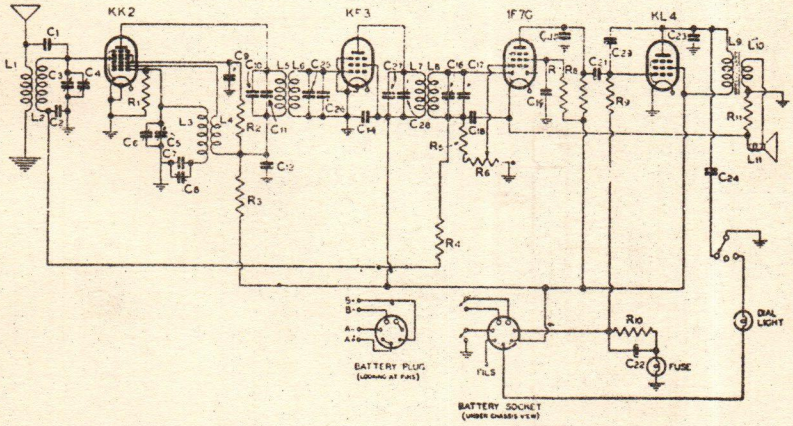
Vibrator Convertor for Battery Receivers



No. on Diagram	
R1	2.6 ohm
R2	1.5 ohm
C1	1mf (200V)
C2	1mf (200V)
C3	32mf (350V)
C4	1mf (200V)
C5	8mf (500V)
C6	0.05mf (200V)
C7	0.05mf (200V)
C8	0.05mf (400V)
L1	Choke 6 ohm
L2	Choke R.F. (pye wound)
L3	Choke R.F. (solenoid)
L4	Choke 250 ohm
L5	Power Transform.
L6	" "
L7	" "

BRITON B349

4-Valve Broadcast Battery Operated Receiver



NO. ON DIAGRAM	VALUE
C1	4mmf
C2	0.05mf
C3	Tuning Gang
C5	Tuning Gang
C4	0-25mmf
C6	2.5-30 mmf
C7	295 mmf
C8	2.5-30 mmf
C9	0.01 mf
C10	80 mmf
C11	2.5-30 mmf
C12	0.01 mf
C14	0.1 mf
C16	2.5-30 mmf
C17	80 mmf
C18	100 mmf

C19 - 0.05mf
C20 - 100mmf
C21 - 0.01mf
C22 - 25mf
C23 - 0.002mf
C24 - 0.01mf

C25 - 2.5-30 mmf
C26 - 80 mmf
C27 - 80 mmf
C28 - 2.5-30 mmf
C29 - 10 mmf
R1 - 100,000 ohm

R2 - 50,000 ohm
R3 - 1,000 ohm
R4 - 2 megohm
R5 - 50,000 ohm
R6 - 0.5meg. pot. & switch

R7 - 1 megohm
R8 - 0.25 megohm
R9 - 1 megohm
R10 - 400 ohm
R11 - 0.6 ohm (Part of Speaker unit.)

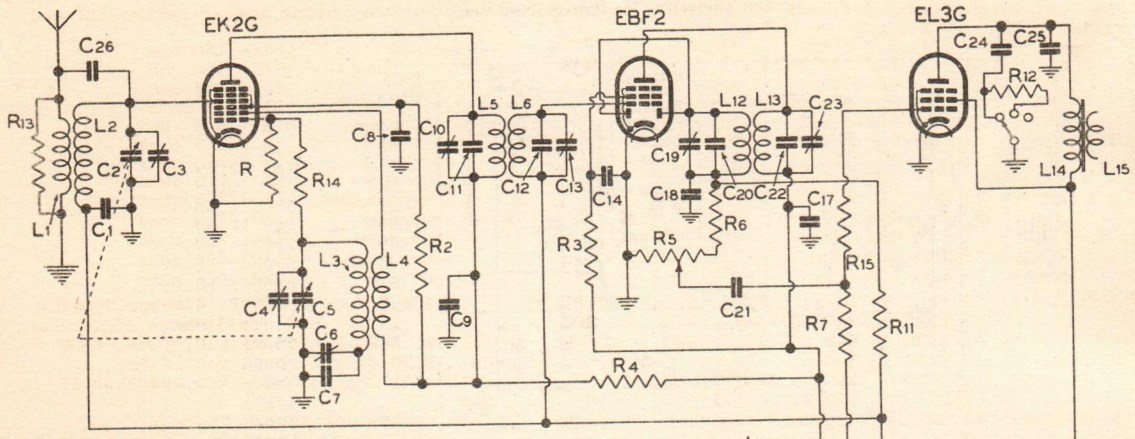
V O L T A G E A N A L Y S I S.

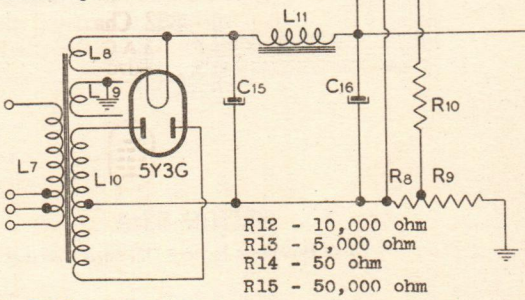
VALVE TYPE	PLATE VOLTAGE	SCREEN VOLTAGE	BIAS VOLTAGE	FILAMENT VOLTS.
KK2	120	55	0	2
KF3	130	130	0	2
1K7G	30	20	0	2
KL4	125	130	5	2

VALVES: KK2 Convertor. KF3 I.F. 1F7G det. KL4 output. I.F.472.5 K.C.
COVERAGE: 1550-540 KC/S. SPEAKER: Permag.

BRITON B41 Chassis Type B341

3/4 Broadcast A.C. Operated Receiver





C1-0.1mf
C4-2.5-30mmf
C6-2.5-30mmf
C7-330mmf
C8-0.1mf
C9-0.01mf
C10-2.5-30mmf
C11-80mmf
C14-0.01mf
C15-8mf sq.
C16-8mf round
C17-0.01mf
C18-100mmf
C21-0.004mf
C22-80mmf
C23- 2.5-30mmf
C24- 0.02mf
C25- 0.004mf
C26- 4mmf
R1 - 100,000 ohm
R2 - 150,000 ohm
R3 - 100,000 ohm
R4 - 10,000 ohm
R5 - 0.5 meg.
R6 - 50,000 ohm
R7 - 1 meg.
R8 - 75 ohm
R9 - 45 ohm
R10- 1 meg.
R11- 2 meg.
R12 - 10,000 ohm
R13 - 5,000 ohm
R14 - 50 ohm
R15 - 50,000 ohm
L1-30 ohm
L2- 4 ohm
L3- 2.5 ohm
L4- 3.5 ohm
L5,L6,L12 &
L13- 8 ohm
L14- 600ohm
L15-0.5 ohm
L7- 60 ohm
L10-600 ohm
L11-1500 "
Voice Coil-
0.5 ohm

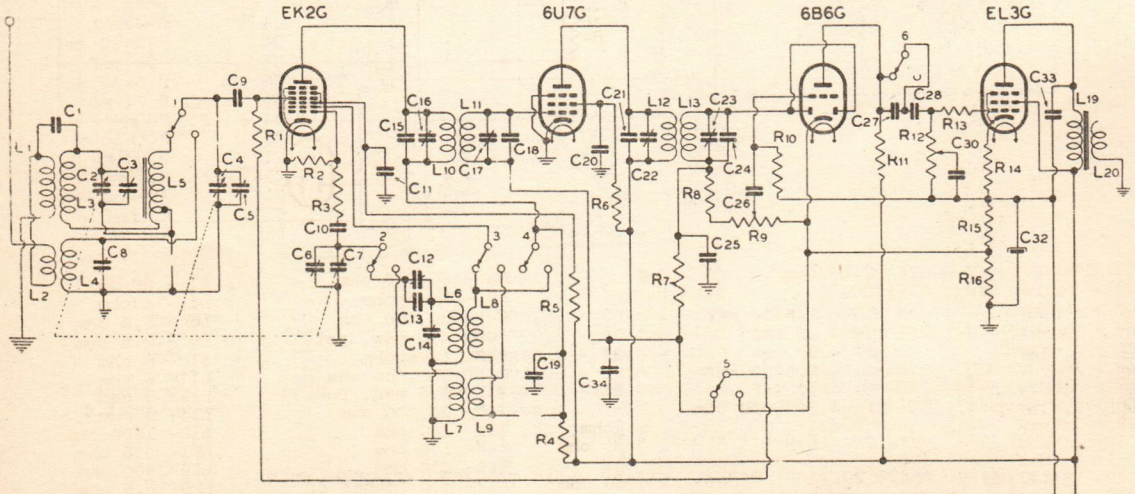
VOLTAGE ANALYSIS:-

VALVE	PLATE	SCREEN	BIAS
EK2G	190	50	2
EBF2	230	80	2
EL3G	210	230	5
5Y3G	300V.A.C. per plate.		

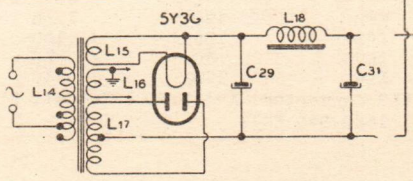
I.F.472.5 K.C. SPEAKER: 1500 ohm field.
VALVES: EK2G Convertor. EBF2 det. & I.F.
EL3G output. 5Y3G rectifier.
COVERAGE: 1550 to 540 K.C.

BRITON B52 Chassis Type B552

4/5 Dual Wave A.C. Operated Receiver



NOTE- SWITCH SECTIONS 1-6 ARE GANGED



BRITON B52 Chassis Type B552 (Contd.)

NOTE: C34, which does not appear in circuit, is connected between the moving arm of Switch "5" and chassis.

C1 - 8mmf	C14- 2.5-30mmf	C24- Part of	R1 - 1 megohm	R14- 150 ohm
C2 - Tuning Gang	C15- Part of Coil	Coil 42/419	R2 - 50,000 ohm	R15- 100 ohm
C3 - " "	42/315	C25- 100mmf	R3 - 25 ohm	R16- 125 ohm
C4 - " "	C16- 2.5-30mmf	C26- .01mf	R4 - 10,000 ohm	L1 - 30 ohms
C5 - " "	C17- 2.5-30mmf	C27- .001mf	R5 - 150,000 ohm	L3 - 4.0 ohms
C6 - " "	C18- Part of Coil	C28- .01mf	R6 - 60,000 ohm	L5 - 3.5 ohms
C7 - " "	42/315	C29- 16mf	R7 - 1 megohm	L6 - 2.5 ohms
C8 - 2.5-30mmf	C19- .01mf	C31- 8mf	R8 - 50,000 ohm	L10- 7.5 ohms
C9 - 100mmf	C20- .01mf	C32- 25mf	R9 - 0.5 megohm pot.	L11- 7.5 ohms
C10- 100mmf	C21- Part of Coil	C30- .006mf	R10- 0.5 megohm	L12- 7.5 ohms
C11- .01mf	42/419	C33- .004mf	R11- 0.25 megohm	L13- 7.5 ohms
C12- 2.5-30mmf	C22- 2.5-30mmf	C34- .01mf	R12- 0.5 meg. pot.	L19- 600 ohms
C13- 420mmf	C23- 2.5-30mmf		R13- 50,000 ohm	L20- 0.5 ohms

VOLTAGE ANALYSIS:

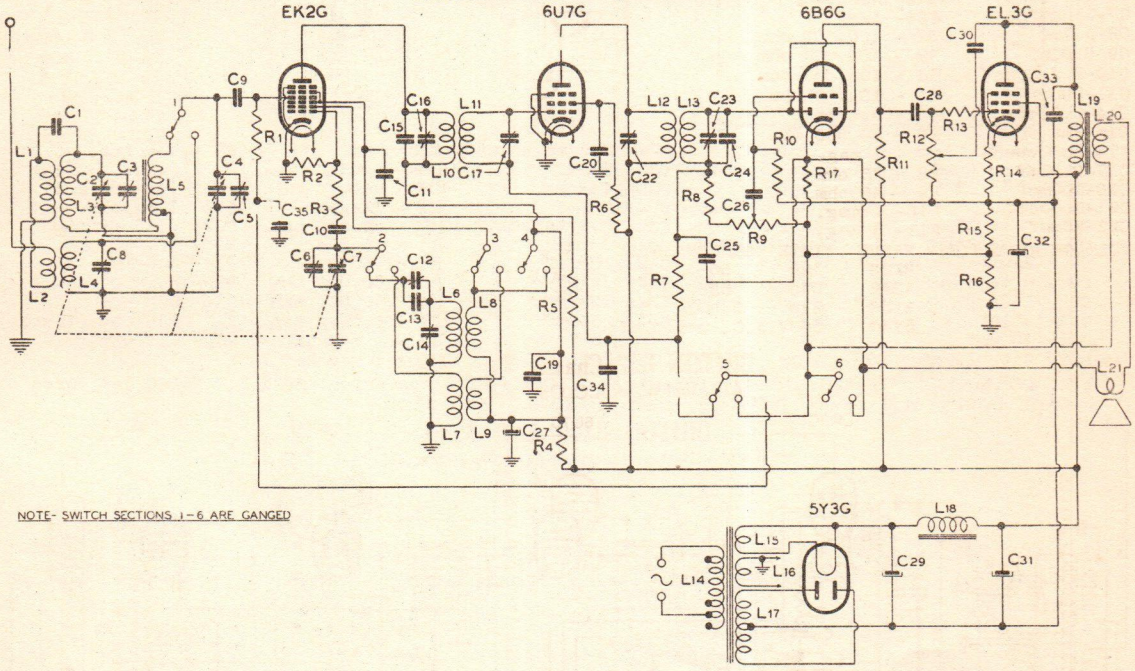
VALVE	PLATE	SCREEN	BIAS	OSC.PLATE
EK2G	200	55	-2	200
6U7G	245	100	-2	
6B6G	100	-	-1.5	
EL3G	220	245	-5.5	
5Y3G	300 A.C. volts per plate			

I.F. 472.5 K.C. SPEAKER: Electro Dynamic 12", resistance 1500 ohms.
VALVES: EK2G Convertor. 6U7G I.F. 6B6G - det. EL3G output. 5Y3G rectifier.
COVERAGE: 1550 to 540 K.C. and 8 to 22 M.C.

Voltages measured with 1000 ohms p.v. meter, no signal, volume control at zero.

BRITON B52 Chassis Type B352

4/5 Dual Wave A.C. Operated Receiver



C1 - 8mmf	C14- 2.5-30mmf	C27- 8mf	R6 - 60,000 ohm	L1 - 30 ohm
C2 - Tuning Gang	C15- 80mmf	C28- 0.01mf	R7 - 1 megohm	L3 - 4 ohm
C3 - 0-25mmf	C16- 2.5-30mmf	C29- 16mf	R8 - 50,000 ohm	L5 - 3.5 ohm
C4 - Tuning Gang	C17- Part of Coil	C31- 8mf	R9 - 0.5 meg. pot.	L6 - 2.5 ohm
C5 - 0-10mmf	42/319	C30- 250mmf	R10- 1 megohm	L10- 8 ohm
C6 - 2.5-30mmf	C19- 0.01mf	C32- 25mf	R11- 250,000 ohm	L11- 8 ohm
C7 - Tuning Gang	C20- 0.01mf	C33- 0.004mf	R12- 0.5 meg. pot.	L12- 8 ohm
C8 - 2.5-30mmf	C22- Part of Coil	C34- 0.01mf	R13- 50,000 ohm	L13- 8 ohm
C9 - 100mmf	42/421	R1 - 1 megohm	R14- 150 ohm	L18- 1500 ohm
C10- 100mmf	C23- 2.5-30mmf	R2 - 50,000 ohm	R15- 100 ohm	L21- 0.5 ohm
C11- 0.01mf	C24- 80mmf	R3 - 25 ohm	R16- 125 ohm	L19- 600 ohm
C12- 2.5-30mmf	C25- 100mmf	R4 - 10,000 ohm	R17- 4.5 inches of 27 S.W.G.Eureka wire	L20- 0.5 ohm
C13- 420mmf	C26- 0.01mf	R5 - 150,000 ohm		

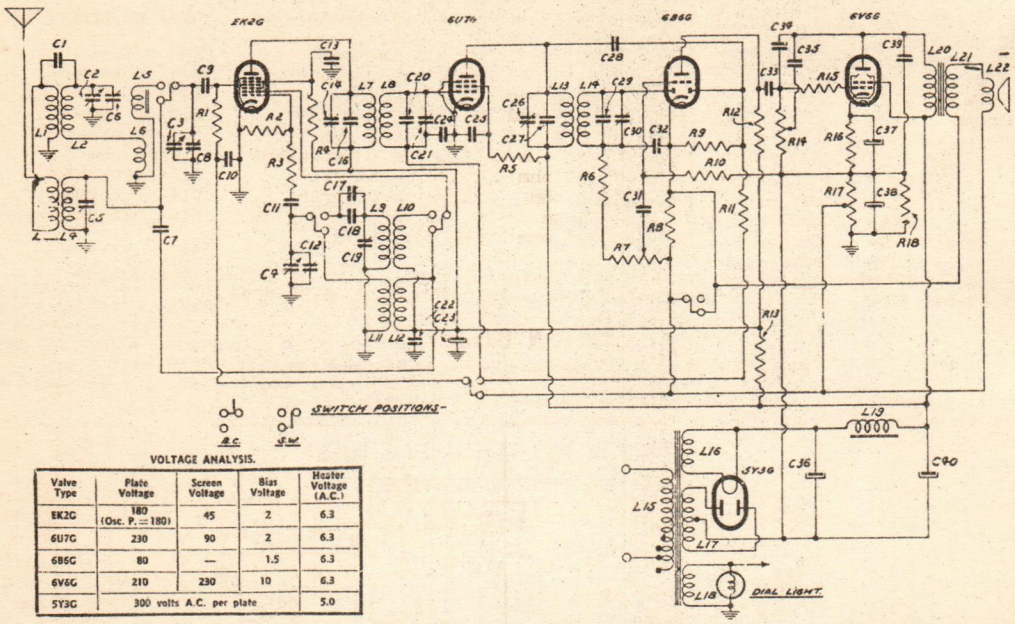
VOLTAGE ANALYSIS:

VALVE	PLATE	SCREEN	BIAS	OSC.PLATE
EK2G	180	45	2	180
6U7G	230	90	2	
6B6G	80	-	1.5	
EL3G	210	230	5	
5Y3G	300 volts A.C. per plate			

I.F. 472.5 K.C. SPEAKER: 1500 ohm field.
VALVES: EK2G Convertor. 6U7G I.F. 6B6G - det. EL3G output. 5Y3G rectifier.
COVERAGE: 1550 to 540 K.C. and 8 to 22 M.C.

BRITON B352

4/5 Dual Wave A.C. Operated Receiver



VOLTAGE ANALYSIS.

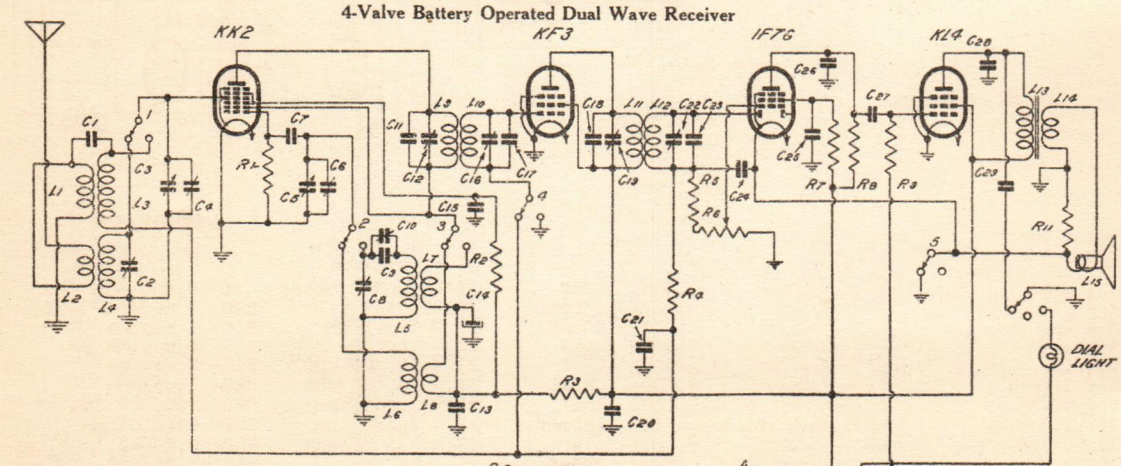
Valve Type	Plate Voltage	Screen Voltage	Bias Voltage	Heater Voltage (A.C.)
EK2G	180 (Osc. P. = 180)	45	2	6.3
6U7G	230	90	2	6.3
6B6G	80	—	1.5	6.3
6V6G	210	230	10	6.3
5Y3G	300 volts A.C. per plate			5.0

C1 - 8mmf
C2 - Gang Cond.
C3 - " "
C4 - " "
C5 - 0 to 35mmf
C6 - 0 to 25mmf
C7 - Neutralising
C8 - 0 to 25mmf
C9 - 100mmf
C10 - .01mf
C11 - 100mmf
C12 - 0 to 25mmf
C13 - .01mf
C14 - 2.5 to 30mmf
C16 - 80mmf
C17 - 2.5 to 30mmf
C18 - 420mmf
C19 - 2.5 to 30mmf
C20 - 80mmf
C21 - 2.5 to 30mmf
C22 - .01mf
C23 - 8mf
C24 - .01mf
C25 - .01mf
C26 - 2.5 to 30mmf
C27 - 80mmf
C28 - 15mmf
C29 - 80mmf
C30 - 2.5 to 30mmf
C31 - .01mf
C32 - 100mmf
C33 - .01mf
C34 - 10mmf
C35 - 250mmf
C36 - 16mf
C37 - 25mf
C38 - 25mf
C39 - .004mf
C40 - 8mf
R1 - 1megohm
R2 - 50,000 ohm
R3 - 25 ohm
R4 - .15 meg.
R5 - 60,000 ohm
R6 - 50,000 ohm
R7 - 0.5meg.Pot.
R9 - 1 megohm
R10 - 1 megohm
R8 - 4.5 ins. of 27 S.W.G. Eureka (on speaker)
R11 - 1 megohm
R12 - 0.25 megohm
R13 - 10,000 ohm
R14 - 0.5 meg.Pot.
R15 - 50,000 ohm
R16 - 250 ohm
R17 - 225 ohm (tapped)
R18 - 250 ohm

I.F. 472.5 K.C. SPEAKER: Electro Dynamic. VALVES: EK2G Convertor. 6U7G I.F. 6B6G det. 6V6G - output. 5Y3G rectifier. COVERAGE: 1550-540 KC/S. 8-22 MC/S.

BRITON B440 AND B540

4-Valve Battery Operated Dual Wave Receiver



VOLTAGE ANALYSIS

Valve Type	Plate Voltage	Screen Voltage	Bias Voltage	Filament Volts
KK2	120	55	0	2
KF3	130	130	0	2
IF7G	30	20	0	2
KL4	125	130	5	2

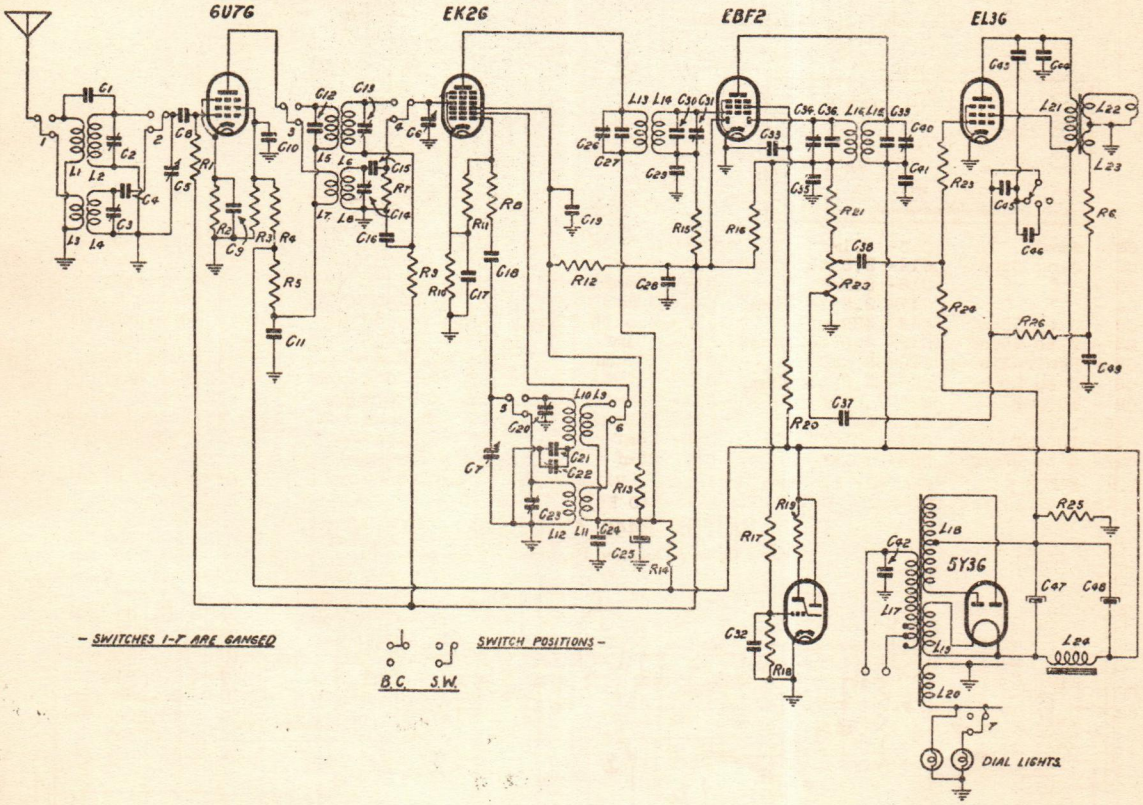
BRITON B440 & B540 (Contd.)

C1 - 4mmf
C2 - 0 to 35mmf
C3 - Tuning Gang
C4 - 0 to 10mmf
C5 - Tuning Gang
C6 - 0 to 35mmf
C7 - 100mmf
C8 - 2.5 to 30mmf
C9 - 380mmf
C10- 2.5 to 30mmf
C11- 80mmf
C12- 2.5 to 30mmf
C13- 0.01mf
C14- 32mf
C15- 0.01mf
C16- 2.5 to 30mmf
C17- 80mmf
C18- 80mmf
C19- 2.5 to 30mmf
C20- 0.1mf
C21- 0.01mf
C22- 2.5 to 30mmf
C23- 80mmf
C24- 100mmf
C25- 0.05mf
C26- 100mmf
C27- 0.01mf
C28- 0.002mf
C29- 0.02mf
C30- 25mf
C31- 10mmf(Wired between grid and plate of KL4)
R1 - 50,000 ohm
R2 - 50,000 ohm
R3 - 1,000 ohm
R4 - 2 megohm
R5 - 50,000 ohm
R6 - 0.5 megohm pot.with switch
R7 - 1 megohm
R8 - 0.25 megohm
R9 - 1 megohm
R10- 400 ohm
R11- 0.275 ohm (Mounted on speaker)
R12- 25 ohm (Not shown on diagram, wired in series with KK2 osc. grid)
L1 - 30 ohm
L3 - 4 ohm
L5 - 2 ohm
L7 - 3.5 ohm
L9 - 8 ohm
L10- 8 ohm
L11- 8 ohm
L12- 8 ohm
L13- 600 ohm
L14- 0.5 ohm
L15- 0.5 ohm

I.F. 472.5 K.C. SPEAKER: Permag. VALVES: KK2 Convertor. KF3 - I.F. 1F7G det. KL4 output.
COVERAGE: 1550-540 KC/S. 8-22 MC/S. For Model B540 - 1610-540 KC/S. 8-22 MC/S.

BRITON B452

4/5 Dual Wave A.C. Operated Receiver with Tuning Eye



C1 - 8mmf
C2 - 0-30mmf
C3 - 0-30mmf
C4 - .0045
C5,C6,C7 - Gang Con.
C8 - 100mmf
C9 - .01mf
C10- .01mf
C11- .01mf
C12- 80mmf
C13- 0-30mmf
C14- 0-30mmf
C15- .0045mf
C16- .05mf
C17- .01mf
C18- 100mmf
C19- .01mf
C20- 0-30mmf
C21- 330mmf
C22- 0-30mmf
C23- 0-30mmf
C24- .01mf
C25- 8mf Electro
C26- 0-30mmf
C27- 80mmf
C28- .05mf
C29- .01mf
C30- 80mmf
C31- 0-30mmf
C32- .05mf
C33- .01mf
C34- 0-30mmf
C35- 100mmf
C36- 80mmf
C37- .03mf
C38- .004mf
C39- 80mmf
C40- 0-30mmf
C41- .01mf
C42- .005mf
C43- .001mf
C44- .002mf
C45- 100mmf
C46- 400mmf
C47- 8mf Electro
C48- 16mf Electro
C49- .03mf
R1 - 1 megohm
R2 - 150 ohm
R3 - 30,000 ohm
R4 - 25,000 ohm
R5 - 1,000 ohm
R6 - 1,500 ohm
R7 - 0.5 megohm
R8 - 25 ohm
R9 - 2 megohm
R10- 500 ohm
R11- 50,000 ohm
R12- 5 megohm
R13- 150,000 ohm
R14- 5,000 ohm
R15- 2 megohm
R16- 2 megohm
R17- 5 megohm
R18- 2 megohm
R19- 1,megohm
R20- 100,000 ohm
R21- 50,000 ohm
R22- 0.5 meg. pot.tapped at 35,000
R23- 50,000 ohm
R24- 1 megohm
R25- 100 ohm
R26- 10,000 ohm

VALVES: 6U7G R.F. EK2G Convertor. EBF2 I.F. and det. EL3G output. 5Y3G rectifier.
I.F. 472.5 K.C. SPEAKER: Electro dynamic

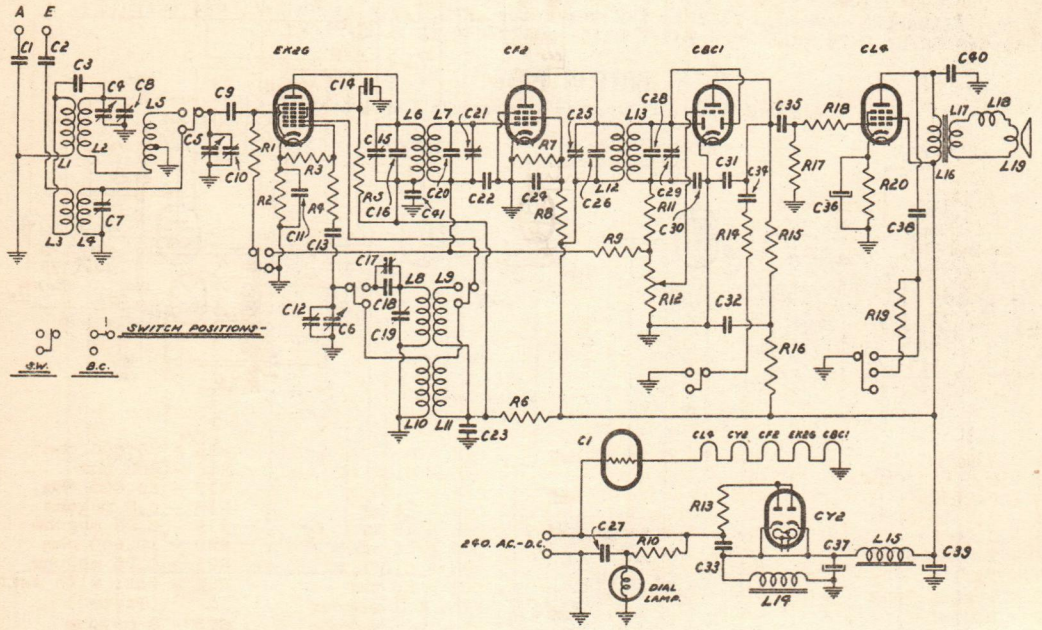
BRITON B452 (Contd.)

VOLTAGE ANALYSIS.

VALVE	PLATE	SCREEN	BIAS	HEATER VOLTAGE (A.C.)	OSC.PLATE
6U7G	210	80	1.5	6.3	
EK2G	190	45	2	6.3	190V
EBF2	220	70	0	6.3	
EL3G	195	220	5.5	6.3	
5Y3G	300 volts A.C. per plate			5.0	

BRITON B468 AND B568

4/5 Dual Wave A.C./D.C. Operated Receiver



C1 - 0.01mf
C2 - 0.01mf
C3 - 8mmf
C4,C5,C6 - Tuning Gang
C7 - 0 to 35mmf
C8 - 0 to 25mmf
C9 - 100mmf
C10- 0 to 10mmf
C11- 0.01mf
C12- 0 to 10mmf
C13- 100mmf
C14- 0.01mf
C15- 2.5 to 30 mmf
C16- 80mmf
C17- 2.5 to 30mmf
C18- 420mmf
C19- 2.5 to 30mmf
C20- 80mmf
C21- 2.5 to 30mmf
C22- 0.01mf
C23- 0.01mf
C24- 0.01mf
C25- 2.5 to 30 mmf
C26- 80mmf
C27- 0.01mf
C28- 80mmf
C29- 2.5 to 30 mmf
C30- 100mmf
C31- 100mmf
C32- 0.25mf
C33- 0.01mf
C34- 0.01mf
C35- 0.01mf
C36- 25mf
C37- 32mmf
C38- 0.02mf
C39- 32mf
C40- 0.004mf
C41- 0.01mf
R1 - 1 megohm
R2 - 500 ohm
R3 - 50,000 ohm
R4 - 50 ohm
R5 - 0.1 meg.
R6 - 5,000 ohm
R7 - 0.25 meg.
R8 - 0.1 meg
R9 - 2 meg.
R10 - 500 ohm
R11 - 50,000 ohm
R12 - 0.5 meg.pot.
R13 - 60 ohm
R14 - 25,000 ohm
R15 - 0.25 meg.
R16 - 50,000 ohm
R17 - 0.5 megohm
R18 - 50,000 ohm
R19 - 10,000 ohm
R20 - 200 ohm
L15 - 250 ohm Choke

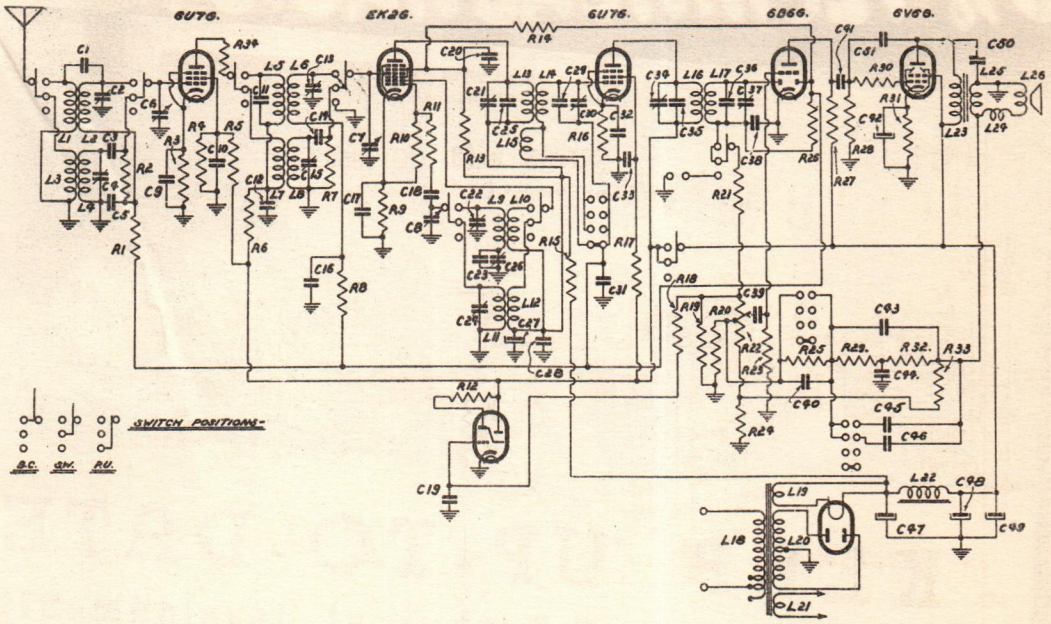
VOLTAGE ANALYSIS.

VALVE TYPE	PLATE VOLTAGE	SCREEN VOLTAGE	BIAS VOLTAGE	FILAMENT VOLTS
EK2G	200 (Osc.p. 200V)	100	3	6.3
CF2	240	80	1	13.0
CBC1	20	-	0	13.0
CL4	225	240	10	33.0
CY2	-	-	-	30.0

VALVES: EK2G Convertor. CF2 I.F. CBC1 det. CL4 output. CY2 rectifier. C1 barretter.
I.F. 472.5 KC/S. SPEAKER: 8" Electrodynamic, resistance 7500 ohms. B568 - 12" Speaker.
COVERAGE: 1550-540 KC/S. 8-22 MC/S. Model B568 - 1600-540 KC/S. 8-22 MC/S.

BRITON B662

5/6 Dual Wave A.C. Operated Receiver with Tuning Eye



C1 - 8 mmf
C2 - 2.5 to 30mmf
C3 - 0.0045mf
C4 - 2.5 to 30mmf
C5 - 0.05mf
C6 - Tuning Gang
C7 - Tuning Gang
C8 - Tuning Gang
C9 - 0.01mf
C10- 0.01mf
C11- 80mmf
C12- 0.01mf
C13- 2.5 to 30mmf
C14- 0.0045 mf
C15- 2.5 to 30 mmf
C16- 0.05 mf
C17- 0.01 mf
C18- 100 mmf
C19- 0.02 mf
C20 - 0.01 mf
C21 - 2.5 to 30 mmf
C22 - 2.5 to 30 mmf
C23 - 330 mmf
C24 - 2.5 to 30 mmf
C25 - 80 mmf
C26 - 2.5 to 30 mmf
C27 - 8 mf
C28 - 0.01 mf
C29 - 80 mmf
C30 - 2.5 to 30 mmf
C31 - 0.05 mf
C32 - 0.05 mf
C33 - 0.01 mf
C34 - 2.5 to 30 mmf
C35 - 80 mmf
C36 - 80 mmf
C37 - 2.5 to 30 mmf
C38 - 100 mmf
C39 - 0.05 mf
C40 - 0.1 mf
C41 - 0.1 mf
C42 - 25 mf
C43 - 0.001 mf
C44 - 0.07 mf
C45 - 0.02 mf
C46 - 0.01 mf
C47 - 16 mf
C48 - 16 mf
C49 - 16 mf
C50 - 0.002 mf
C51 - 25 mmf
R1 - 0.1 megohm
R2 - 0.5 megohm
R3 - 200 ohm
R4 - 30,000 ohm
R5 - 25,000 ohm
R6 - 1,000 ohm
R7 - 0.5 megohm
R8 - 2 megohm
R9 - 500 ohm
R10- 50,000 ohm
R11- 25 ohm
R12- 5 megohm
R13- 0.15 megohm
R14- 10 megohm
R15 - 25,000 ohm
R16 - 200 ohm
R17 - 60,000 ohm
R18 - 0.5 megohm
R19 - 0.25 megohm
R20 - 10,000 ohm
R21 - 0.25 megohm
R22 - Pot. with switch (Tapped)
R23 - 2 megohm
R24 - 25 ohm
R25 - 50,000 ohm
R26 - 2 megohm
R27 - 0.25 megohm
R28 - 0.5 megohm
R29 - 10,000 ohm
R30 - 50,000 ohm
R31 - 250 ohm
R32 - 1,000 ohm
R33 - 50 ohm
R34 - 25 ohm

VOLTAGE ANALYSIS.

VALVE TYPE	PLATE VOLTAGE	SCREEN VOLTAGE	BIAS VOLTAGE
6U7G	220	95	1.75
EK2G	190 (Osc.p. 190)	65	2.5
6U7G	220	95	1.75
6B6G	75	-	-
6V6G	200	225	10
5Y3G	310 volts A.C. per plate		

I.F. 472.5 K.C. SPEAKER: 12" Electrodynamic, resistance 1500 ohms.
VALVES: 6U7G R.F. EK2G Convertor. 6U7G I.F. 6B6G det. 6V6G output. 5Y3G Rectifier. 6U5 Eye.
COVERAGE: 1600 to 540 K.C. and 8 to 22 M.C.

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Manufactured by Amalgamated Wireless (A'sia) Ltd., 47 York Street, Sydney

FISK RADIOLA 60, 61 and 83

4 Valve, one and two band, Vibrator Operated, Mantel Superheterodynes

TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (Model 61 only) - 13.6-43M. (NOTE: Early production Model 60 receivers had a tuning range of 1500-550 K.C.)
R.F. ALIGNMENT SETTINGS. "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc and Aer.) "Short Wave" (Model 61 only) - 15M. (Osc. and Aer.)
INTERMEDIATE FREQUENCY - 460 K.C. CURRENT CONSUMPTION - 1.25 amps. REPLACEMENT FUSE - 3.0 amps.

VALVE COMPLEMENT -

Model 60.
1C7G Converter
1M5G I.F. amplifier
6G8G I.F. amp., 2nd det., A.V.C., and A.F. Amp.
1L5G Output Pentode

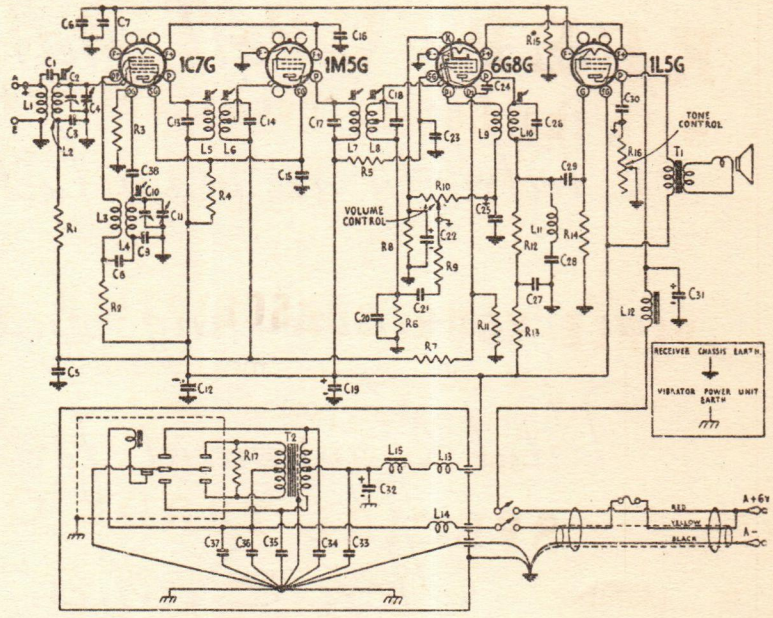
Models 61 and 83.
1C7G Converter
1D5G I.F. Amplifier
6T7G 2nd det., A.V C. and A.F. Amp.
1G5G Output Pentode

VIBRATOR - Model 60 Oak Type 35ZH, Models 61 and 83 Oak Type 65UH or 65UT.
Undistorted Power Output - Model 60-350 milliwatts, Models 61 & 83 - 550 milliwts.

FISK RADIOLA 60

Code No.	RESISTORS
R1	250,000 ohms 1/3 W.
R2	50,000 ohms 1 W.
R3	60,000 ohms, 1/3 W
R4	50,000 ohms 1 W.
R5	500,000 ohms 1 W.
R6	1.75 megohms, 1/3 W.
R7	1 megohm 1/3 W.
R8	2,000 ohms 1/3 W.
R9	500,000 ohms 1/3 W.
R10	500,000 ohms Volume Control.
R11	1 megohm 1/3 W.
R12	100,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	500,000 ohms 1/3 W.
R15	33.3 ohms wire wound.
R16	100,000 ohms Tone Control.
R17	400 ohms 1/3 W.

Code No.	CONDENSERS
C1	4 mmfd. mica.
C2	2-10 mmfd. air trim.
C3	.05 mfd. paper.
C4	Tuning Condenser.
C5	.05 mfd. paper.
C6	.5 mfd. paper.
C7	110 mmfd. mica (L).
C8	.05 mfd. paper.
C9	440 mmfd. mica (Padder).
C10	16-34 mmfd. air trim.
C11	Tuning Condenser.
C12	.1 mfd. paper
C13	115 mmfd. mica (A).
C14	130 mmfd. mica (H).
C15	.1 mfd. paper.
C16	.1 mfd. paper.
C17	115 mmfd. mica (A).
C18	130 mmfd. mica (H).
C19	8 mfd. 450V. Electrolytic.
C20	110 mmfd. mica (L).
C21	.01 mfd. paper.
C22	25 mfd. 25V. Electrolytic.
C23	.1 mfd. paper.
C24	50 mmfd. mica (D).
C25	110 mmfd. mica (L).
C26	70 mmfd. mica (N).
C27	.5 mfd. paper.
C28	700 mmfd. mica.
C29	.02 mfd. paper.
C30	.035 mfd. paper.
C31	500 mfd. Electrolytic.
C32	8 mfd. 450V. Electrolytic.
C33	.01 mfd. paper.
C34	.02 mfd. paper (2,000V.).
C35	.02 mfd. paper (2,000V.).
C36	300 mmfd. mica.
C37	.5 mfd. paper.
C38	110 mmfd. mica (L)



SOCKET VOLTAGES (60)

Valve.	Bias. Voltages.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Fil. to Chassis. +	Fil. to Chassis. —
1C7G Detector ..	2.0*	50	150	0.40	4.0	2.0
Oscillator ..	—	—	65	1.50	—	—
1M5G I.F. Amplifier	0	50	150	0.25	2.0	0
6G8G Reflex Amp.	2.0**	30	45*	0.90	6.0	0
1L5G Pentode ...	4.0*	150	140	10.0	6.0	4.0

* Cannot be measured with ordinary voltmeter.

** Cathode to chassis.

Measured with no signal. Volume Control at maximum clockwise.

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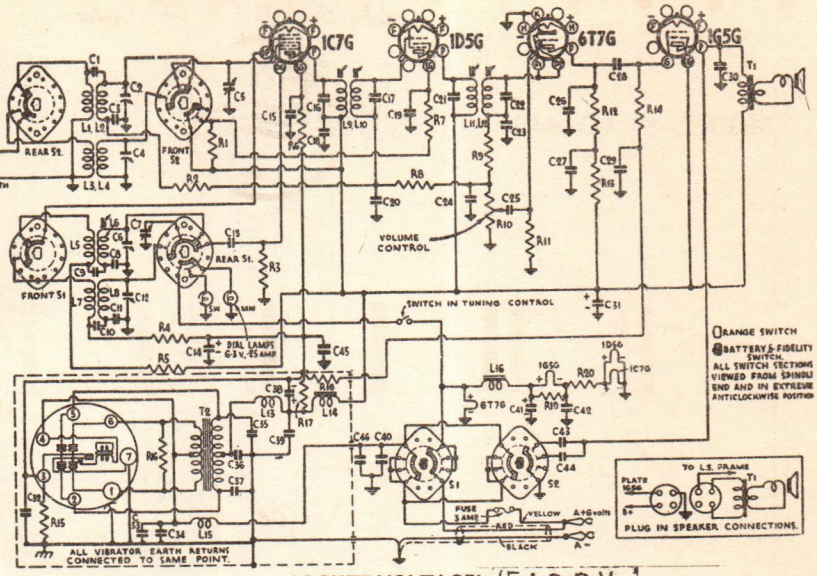
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FISK RADIOLA 61

R1	50,000 ohms 1 W.
R2	100,000 ohms 1/3 W.
R3	50,000 ohms 1/3 W.
R4	400 ohms 1/3 W.
R5	50,000 ohms 1 W.
R6	50,000 ohms 1 W.
R7	70,000 ohms 1 W.
R8	1.75 megohms 1/3 W.
R9	20,000 ohms 1/3 W.
R10	500,000 ohms Vol. Control.
R11	10 Meg. 1 W.
R12	250,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	500,000 ohms 1/3 W.
R15	450 ohms 3 W. wire wound.
R16	400 ohms 1/3 W.
R17	5,000 ohms 1 W.
R18	100,000 ohms 1/3 W.
R19	33 ohms 3 W. wire wound.
R20	11 ohms 3 W. wire wound.



Code No.	CONDENSERS		
C1	4 mmfd. mica	C25	.02 mfd. paper.
C5	Tuning condenser.	C26	1,000 mmfd. mica.
C6	17-34 mmfd. air trim.	C27	.5 mfd. paper.
C2	2-10 mmfd. air trim.	C28	.02 mfd. paper.
C3	.05 mfd. paper.	C29	.1 mfd. paper.
C4	2-20 mmfd. air trim.	C30	.0025 mfd. paper.
C7	Tuning condenser.	C31	8 mfd. 450V. Electrolytic.
C8	440 mmfd. mica (Padder).	C32	200 mmfd. mica (J).
C9	.05 mfd. paper.	C33	.5 mfd. paper.
C10	.05 mfd. paper.	C34	300 mmfd. mica.
C11	3,500 mmfd. mica (Padder).	C35	.01 mfd. paper.
C12	2-10 mmfd. air trim.	C36	.01 mfd. paper.
C13	110 mmfd. mica (L).	C37	.01 mfd. paper.
C14	20 mfd. 180V. Electrolytic.	C38	8 mfd. 450V. Electrolytic.
C15	.1 mfd. paper.	C39	.01 mfd. paper.
C16	70 mmfd. mica (N).	C40	1,000 mmfd. mica.
C17	70 mmfd. mica (N).	C41	500 mfd. 12V. Peak Electrolytic.
C18	.1 mfd. paper.	C42	.5 mfd. paper.
C19	.1 mfd. paper.	C43	.02 mfd. paper.
C46	.5 mfd. paper.	C44	.01 mfd. paper.
C20	.05 mfd. paper.	C45	.25 mfd. paper.
C21	70 mmfd. mica (N).		
C22	70 mmfd. mica (N).		
C23	110 mmfd. mica (L)		
C24	110 mmfd. mica (L).		

SOCKET VOLTAGES (549 D.V.)

Valves.	Control Grid to Chassis. Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current. M.A.	Positive (+) Filament Volts to Chassis
1C7G Detector, M.W. ...	0	40	140	1.0	2.0
S.W. ...	0	60	140	1.3	—
Oscillator, M.W. ...	—	—	60	1.6	—
S.W. ...	—	—	120	3.4	—
1D5G I.F. Amp., M.W. ..	0	45	140	2.0	2.0
S.W. ..	0	55	140	3.0	—
6T7G 2nd Detector	0	—	50*	.3	6.0
1G5G Output	—130*	140	135	10	2.0

* Cannot be measured with ordinary voltmeter.

Measured with Volume Control at maximum clockwise. No signal input.

FISK RADIOLA 83

R1	100,000 ohms 1/3 W.	C1	4 mmfd. mica.
R2	50,000 ohms 1/3 W.	C2	6-14 mmfd. air trim.
R3	50,000 ohms 1 W.	C3	Tuning condenser.
R4	50,000 ohms 1 W.	C4	.05 mfd. paper.
R5	1.75 megohms 1/3 W.	C5	17-34 mmfd. air trim.
R6	20,000 ohms 1/3 W.	C6	Tuning condenser.
R7	500,000 ohms Vol. Control.	C7	440 mmfd. mica (Padder).
R8	10 meg. 1 W.	C8	.05 mfd. paper.
R9	250,000 ohms 1 W.	C9	.05 mfd. paper.
R10	20,000 ohms 1 W.	C10	70 mmfd. mica (N).
R11	500,000 ohms 1/3 W.	C11	70 mmfd. mica (N).
R12	100,000 ohms 1/3 W.	C12	.1 mfd. paper.
R13	100,000 ohms Tone Control.	C13	70 mmfd. mica (N).
		C14	70 mmfd. mica (N).
R14	450 ohms 3 W.	C15	110 mmfd. mica (L).
R15	400 ohms 1/3 W.	C16	110 mmfd. mica (L).
R16	33 ohms 3 W.	C17	.02 mfd. paper.
R17	11 ohms 3 W.	C18	1,000 mmfd. mica

SOCKET VOLTAGES: (549 MVZ)

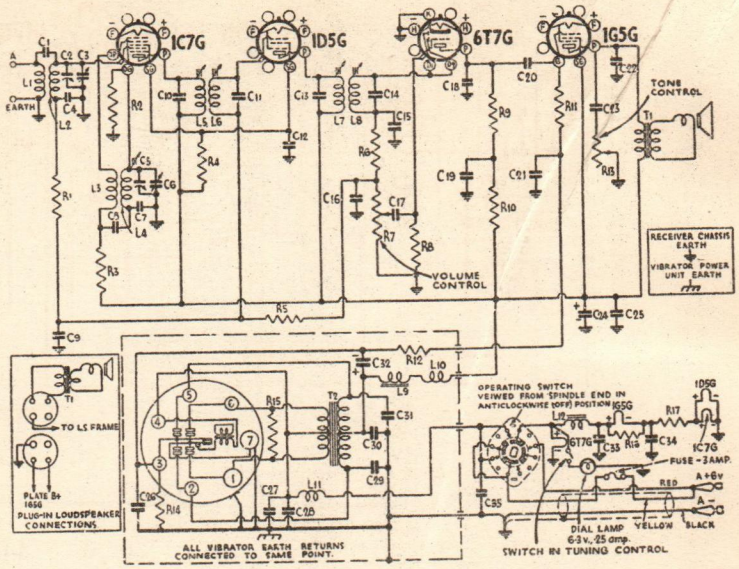
Valves.	Control Grid to Chassis. Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current. M.A.	Positive (+) Filament Volts to Chassis.
1C7G Detector	0	40	140	1.0	2.0
Oscillator	—	—	60	1.5	—
1D5G I.F. Amplifier	0	40	140	2.0	2.0
6T7G 2nd Detector	0	—	50*	.3	6.0
1G5G Pentode	—13*	140	135	10.0	6.0

* Cannot be measured with ordinary voltmeter.

Measured with no signal input. Volume Control at maximum clockwise.

MODEL 83 (Contd.)

C19	.5 mfd. paper.
C20	.02 mfd. paper.
C21	.1 mfd. paper.
C22	.0025 mfd. paper.
C23	.02 mfd. paper.
C24	8 mfd. 450V. Electrolytic.
C25	.1 mfd. paper.
C26	200 mmfd. mica (J).
C27	.5 mfd. paper.
C28	300 mmfd. mica.
C29	.01 mfd. paper.
C30	.01 mfd. paper.
C31	.01 mfd. paper.
C32	8 mfd. 450V. Electrolytic.
C33	500 mfd. 12 V.P. Electrolytic.
C34	.5 mfd. paper.
C35	.5 mfd. paper.



FISK RADIOLA 79 and 80

4 and 5 Valve, one and Two Band, Battery Operated Superheterodynes

TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (80 only) - 13.6-43M.
R.F. ALIGNMENT SETTINGS: - "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aer.) "Short Wave" (80 only) - 15M. (Osc. and Aer.).
INTERMEDIATE FREQUENCY - 460 K.C.
CURRENT CONSUMPTION:- Model 79 - "A" Battery - 0.54 amps. 1.14 amps (with dial illumination) "B" Battery - 9-11 M.A. Model 80 - "A" Battery 0.60 amps. 1.20 amps. (with dial illumination). "B" Battery - 13-15 M.A.
VALVE COMPLEMENT -

Model 79

1C7G Converter
1D5G I.F. Amplifier
1K7G 2nd det., A.V.C. and Audio Amplifier
1L5G Output Pentode

1C7G Converter
1D5G I.F. Amplifier
1D5G I.F. Amplifier
1K7G 2nd det., A V.C. and Audio Amp.
1L5G Output Pentode

LOUDSPEAKER (Permanent Magnet). Undistorted Power Output - 350 milliwatts.

FISK RADIOLA 79

R1	100,000 onms 1/3 W.	C1	4 mmfd. mica
R2	50,000 ohms 1/3 W.	C2	2-20 mmfd. air trim.
R3	50,000 ohms 1 W.	C3	Tuning Condens.
R4	40,000 ohms 1 W.	C4	.05 mfd. paper.
R5	60,000 ohms 1/3 W.	C5	70 mmfd. mica (N)
R6	500,000 ohm Vol. Cont.	C6	11-29 mmfd. air trim.
R7	2.3 megs. 1/3 W.	C7	Tuning condenser.
R3	1 meg. 1 W.	C8	420 mmfd. mica (pad.)
R9	1.75 meg. 1/3 W.	C9	.05 mfd. paper.
R10	500,000 ohms 1/3 W.	C10	70 mmfd. mica (N)
R11	250,000 ohms 1 W.	C11	70 mmfd. mica (N)
R12	500,000 ohms 1/3 W.	C12	.1 mfd. paper
R13	200 ohms 1 W.	C13	.05 mfd. paper.
R14	100 ohms 1 W.	C14	70 mmfd. mica (N).
R15	100,000 ohms Tone Control.	C15	70 mmfd. mica (N).
R16	1.75 meg. 1/3 W.	C16	110 mmfd. mica (L).
		C17	110 mmfd. mica (L).
		C18	.02 mfd. paper.
		C19	50 mmfd. mica (D).
		C20	.1 mfd. paper.
		C21	.1 mfd. paper.
		C22	.01 mfd. paper.
		C23	200 mmfd. mica (J)
		C24	.5 mfd. paper.
		C25	.0025 mfd. paper.
		C26	.035 mfd. paper.
		C27	.5 mfd. paper.
		C28	.02 mfd. paper.

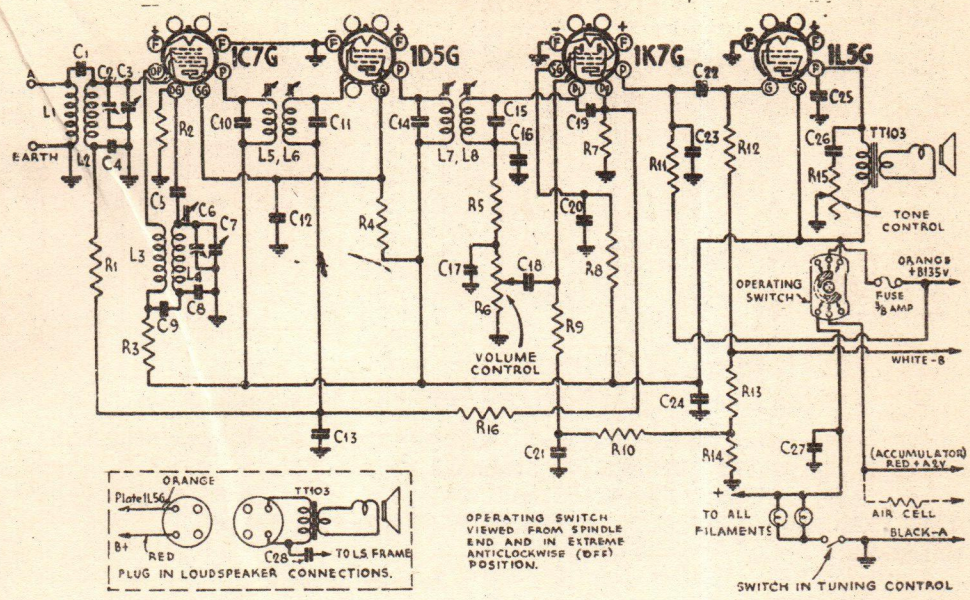
SOCKET VOLTAGES.

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1C7G Detector	0	45	130	1.4	2.0
Oscillator	—	—	60	1.2	—
1D5G I.F. Amplifier ..	0	45	130	2.6	2.0
1K7G Audio Amplifier	—1.5*	60*	63*	0.25	2.0
1L5G Pentode	—4.5*	130	125	5.4	2.0

* Cannot be measured with ordinary voltmeter.

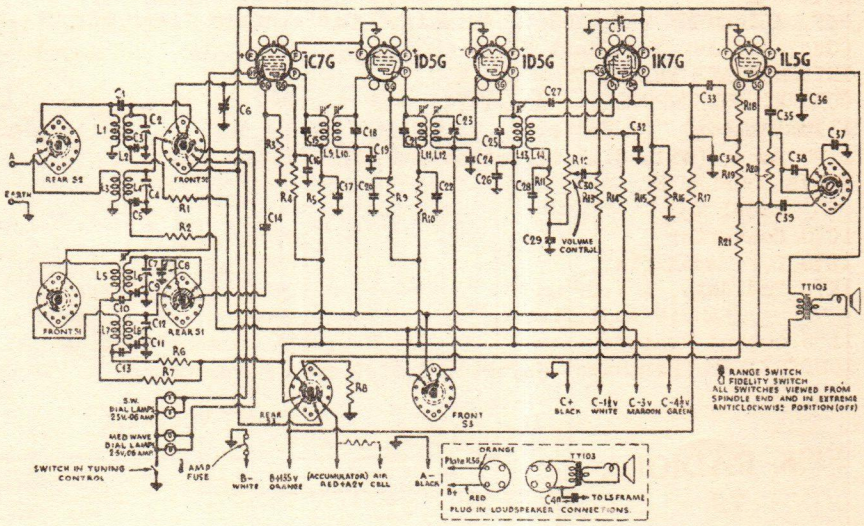
Measured with no signal input and volume control in the maximum clockwise position.

FISK RADIOLA 79 (Contd.)



The 1/8 amp. fuse shown in the B+ lead in the above diagram should be in the B— lead. Although the B— lead is marked white, this refers only to the section between the fuse and the receiver chassis. The lead is black from the fuse to the "B" battery.

FISK RADIOLA 80



Although the B— lead is marked white in the above diagram, this refers only to the section between the fuse and the receiver chassis. The lead is black from the fuse to the "B" battery.

Code No.	RESISTORS
R1	100,000 ohms 1/3 W.
R2	100,000 ohms 1/3 W.
R3	50,000 ohms, 1/3 W.
R4	50,000 ohms 1 W.
R5	300 ohms 1/3 W.
R6	400 ohms 1/3 W.
R7	50,000 ohms 1 W.
R8	600 ohms 1 W.
R9	200,000 ohms 1 W.
R10	300 ohms 1/3 W.
R11	100,000 ohms 1/3 W.
R12	500,000 ohms Vol. Control.
R13	1.75 megohms 1/3 W.
R14	1 megohm 1 W.
R15	1.75 megohms 1/3 W.
R16	1.75 megohms 1/3 W.
R17	250,000 ohms 1 W.
R18	100,000 ohms 1/3 W.
R19	390,000 ohms 1/3 W.
R20	250,000 ohms 1/3 W.
R21	50,000 ohms 1/3 W.

Code No.	CONDENSERS
C1	4 mmfd. mica.
C2	2-10 mmfd. air trim.
C3	.05 mfd. paper.
C4	2-20 mmfd. air trim
C5	.05 mfd. paper.
C6	Tuning Condenser.
C7	11-29 mmfd. air trim
C8	Tuning Condenser.
C9	420 mmfd. mica (padder).
C10	.05 mfd. paper.
C11	3,500 mmfd. mica (padder).
C12	2-10 mmfd. air trim.
C13	05 mfd. paper.
C14	110 mmfd. mica (L).
C15	115 mmfd. mica (A).
C16	.1 mfd. paper.
C17	05 mfd. paper.
C18	130 mmfd. mica (H).
C19	.02 mfd. paper.
C20	.1 mfd. paper.
C21	115 mmfd. mica (A).
C22	.05 mfd. paper.
C23	130 mmfd. mica (H).
C24	.02 mfd. paper.
C25	70 mmfd. mica (N).
C26	.5 mfd. paper.
C27	50 mmfd. mica (D).
C28	110 mmfd. mica (L).
C29	110 mmfd. mica (L).
C30	.01 mfd. paper.
C31	.5 mfd. paper.
C32	.1 mfd. paper.
C33	.01 mfd. paper.
C34	350 mmfd. mica.
C35	.05 mfd. paper.
C36	.0025 mfd. paper.
C37	2,000 mmfd. mica.
C38	700 mmfd. mica.
C39	2,000 mmfd. mica.
C40	.02 mmfd. paper.

FISK RADIOLA 80 (Contd.)

SOCKET VOLTAGES.

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1C7G Detector M.W.	0	45	135	1.4	2.0
S.W	--3*	55	135	1.2	—
Oscillator M.W.	—	—	65	1.3	—
S.W.	—	—	130	3.6	—
1D5G I.F. Amplifier					
M.W.	0	27	135	1.2	2.0
S.W.	0	24	135	0.9	—

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1D5G I.F. Amplifier					
M.W.	--3*	23	135	0.2	2.0
S.W.	0	27	135	0.8	—
1K7G Detector	—1.5*	35*	65*	0.2	2.0
1L5G Pentode	- 4.5*	135	130	8.0	2.0

FISK RADIOLA 81, 82 and 309

5-Valve, One and Two Band, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (82 and 309) 13.6-43M. R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 (Osc. and Aer.). "Short Wave" (82 and 309)- 15M. (Osc. and Aer.).
INTERMEDIATE FREQUENCY:- 460 K.C. POWER CONSUMPTION:- 60 Watts.
VALVE COMPLEMENT -

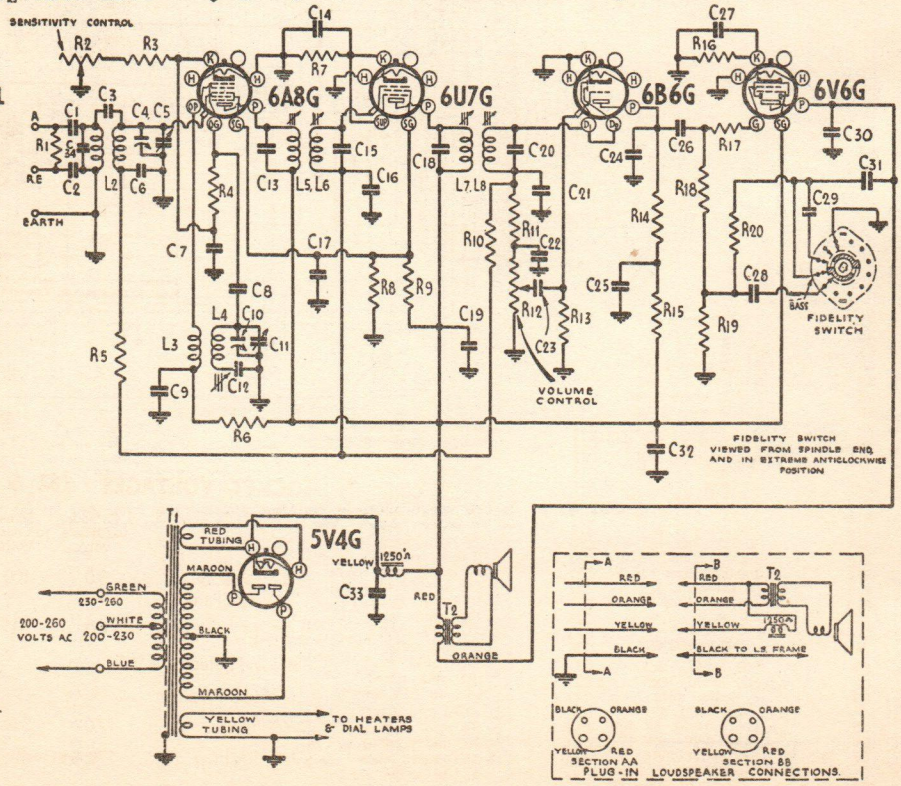
Model 81	Models 82 & 309
6A8G Freq. Converter	6J8G Frequency Converter
6U7G I.F. Amplifier	6U7G I.F.Amplifier
6B6G 2nd det.,A.V.C. & A.F.Amp.	6B6G 2nd det.,A.V.C. & A.F. Amp.
6V6G Output	6V6G Output
5V4G Rectifier	5V4G Rectifier

LOUDSPEAKER - 6½-inch Electrodynamic. Undistorted Power Output - 4.25 watts.

FISK RADIOLA 81

Code No.	RESISTORS
R1	100,000 ohms 1/3 W.
R2	1,500 ohms Sens. Control.
R3	400 ohms 1/3 W.
R4	50,000 ohms 1/3 W.
R5	100,000 ohms 1/3 W.
R6	20,000 ohms 1 W.
R7	900 ohms 1/3 W.
R8	30,000 ohms 2 W.
R9	20,000 ohms 2 W.
R10	1.75 megohms 1/3 W.
R11	60,000 ohms 1/3 W.
R12	500,000 ohms Vol. Control.
R13	10 megohms 1 W.
R14	200,000 ohms 1 W.
R15	20,000 ohms 1 W.
R16	250 ohms 3 W.
R17	50,000 ohms 1/3 W.
R18	390,000 ohms 1/3 W.
R19	50,000 ohms 1/3 W.
R20	250,000 ohms 1/3 W.

Code No.	CONDENSERS
C1	500 mmfd. mica.
C2	500 mmfd. mica.
C3	4 mmfd. mica.
C4	2-20 mmfd. air trim.
C5	Tuning Condenser.
C6	.05 mfd. paper.
C7	.1 mfd. paper.
C8	70 mmfd. mica (N).
C9	05 mfd .paper.
C10	11-29 mmfd. Air Trim.
C11	Tuning Condenser.
C12	420 mmfd. mica (Padder).



FISK RADIOLA 81 (Contd.)

SOCKET VOLTAGES

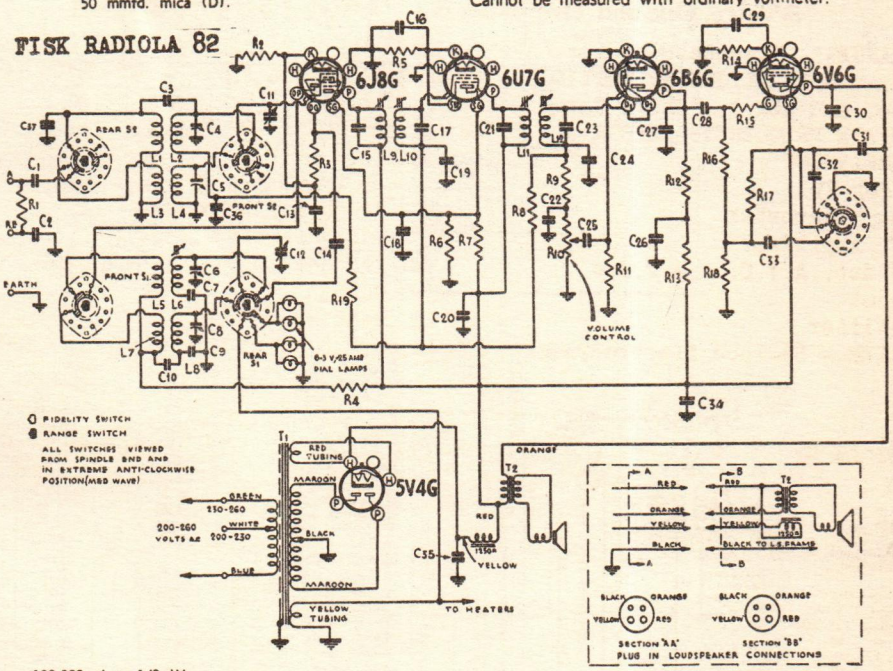
	Cathode to Chassis. Volts.	Screen to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater. Volts
6A8G Detector	4.0	100	250	3.0	6.3
Oscillator	—	—	180	4.0	—
6U7G I.F. Amplifier ..	5.0	100	250	4.0	6.3
6B6G 2nd Detector, A.V.C. Aud. Amp.	—	—	*132	0.6	6.3
6V6G Output	12.0	250	225	45	6.3

5V4G Rectifier ..... 540/270 Volts, 65 M.A., total current 5.0

85 volts across Loudspeaker field.

* Cannot be measured with ordinary voltmeter.

C13	70 mmfd. mica (N).
C14	.1 mfd. paper.
C15	70 mmfd. mica (N).
C16	.05 mfd. paper.
C17	.1 mfd. paper.
C18	70 mmfd. mica (N).
C19	.1 mfd. paper.
C20	70 mmfd. mica (N).
C21	110 mmfd. mica (L).
C22	110 mmfd. mica (L).
C23	.01 mfd. paper.
C24	110 mmfd. mica (L).
C25	.5 mfd. paper.
C26	.02 mfd. paper.
C27	25 mfd. 25V. electro.
C28	2,000 mmfd. mica.
C29	700 mmfd. mica.
C30	.0025 mfd. paper.
C31	.05 mfd. paper.
C32	8 mfd. 450V. electro.
C33	16 mfd. 500V. electro.
C34	50 mmfd. mica (D).



R1	100,000 ohms 1/3 W.
R2	400 ohms 1/3 W.
R3	30,000 ohms 1/3 W.
R4	20,000 ohms 1 W.
R5	600 ohms 1/3 W.
R6	20,000 ohms 2 W.
R7	20,000 ohms 2 W.
R8	1.75 megs. 1/3 W.
R9	60,000 ohms 1/3 W.
R10	500,000 ohms Vol. Control.
R11	10 megs. 1 W.
R12	200,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	250 ohms 3 W.
R15	50,000 ohms 1/3 W.
R16	390,000 ohms 1/3 W.
R17	250,000 ohms 1/3 W.
R18	50,000 ohms 1/3 W.
R19	100,000 ohms 1/3 W.

Code No.	CONDENSERS
C1	500 mmfd. mica.
C2	500 mmfd. mica.
C3	4 mmfd. mica.
C4	2-20 mmfd. air trim.
C5	11-29 mmfd. air trim.
C6	11-29 mmfd. air trim.
C7	420 mmfd. mica (padder).
C8	2-10 mmfd. air trim.
C9	3500 mmfd. mica (padder).
C10	.05 mfd. paper.
C11	Tuning condenser.
C12	Tuning condenser.
C13	.1 mfd. paper.
C14	70 mmfd. mica (N).
C15	70 mmfd. mica (N).
C16	.1 mfd. paper.
C17	70 mmfd. mica (N).
C18	.1 mmfd. paper.
C19	.05 mfd. paper.
C20	.1 mfd. paper.
C21	70 mmfd. mica (N).
C22	110 mmfd. mica (L).
C23	70 mmfd. mica (N).
C24	110 mmfd. mica (L).
C25	.01 mfd. paper
C26	.5 mfd. paper
C27	110 mmfd. mica (L).
C28	.02 mfd. paper
C29	25 mfd. 25V. electro.
C30	.0025 mfd. paper.
C31	.05 mfd. paper.
C32	700 mmfd. mica.
C33	2000 mmfd. mica.
C34	8 mfd. 450V. electro.
C35	16 mfd. 500V. electro.
C36	.05 mfd. paper.
C37	50 mmfd. mica (D).

SOCKET VOLTAGES (82 & 309)

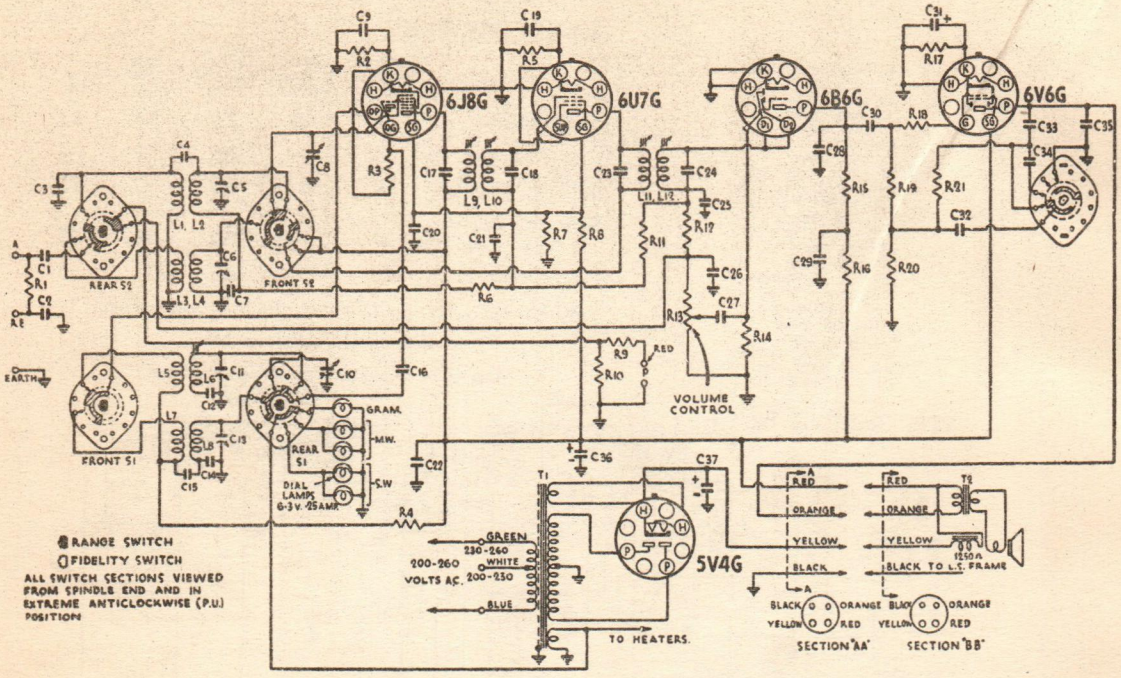
	Cathode to Chassis. Volts.	Screen to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater. Volts.
6J8G Detector	3.0	100	250	1.0	6.3
Oscillator	—	—	150	5.5	—
6U7G I.F. Amplifier ..	4.0	100	250	5.0	6.3
6B6G 2nd Detector, A.V.C., Audio-Amplifier ..	—	—	*132	0.6	6.3
6V6G Output	12.0	250	225	45	6.3

5V4G Rectifier ..... 270/540 volts, 70 M.A., total current 5.0

90 volts across Loudspeaker field.

* Cannot be measured with ordinary voltmeter.

FISK RADIOLA 309



R1	100,000 ohms 1/3 W.	C1	500 mmfd. mica.	C21	.05 mfd. paper.
R2	400 ohms 1/3 W.	C2	500 mmfd. mica.	C22	.1 mfd. paper.
R3	30,000 ohms 1/3 W.	C3	50 mmfd. mica (D).	C23	70 mmfd. mica (N).
R4	20,000 ohms 1 W.	C4	4 mmfd. mica.	C24	70 mmfd. mica (N).
R5	600 ohms 1/3 W.	C5	2-20 mmfd. air trim.	C25	110 mmfd. mica (L).
R6	100,000 ohms 1/3 W.	C6	11-29 mmfd. air trim	C26	110 mmfd. mica (L).
R7	20,000 ohms 2 W.	C7	.05 mfd. paper.	C27	.01 mfd. paper.
R8	20,000 ohms 2 W.	C8	Tuning Condenser.	C28	110 mmfd. mica (L).
R9	50,000 ohms 1/3 W.	C9	.1 mfd. paper.	C29	.5 mfd. paper.
R10	20,000 ohms 1/3 W.	C10	Tuning Condenser.	C30	.02 mfd. paper.
R11	1.75 megohms 1/3 W.	C11	11-29 mmfd. air trim	C31	25 mfd., 25V. electro-lytic.
R12	60,000 ohms 1/3 W.	C12	420 mmfd. mica (padder).	C32	2000 mmfd. mica.
R13	500,000 ohms Vol. Control.	C13	2-10 mmfd. air trim.	C33	.05 mfd. paper.
R14	10 megohm 1 W.	C14	3500 mmfd. mica (padder).	C34	700 mmfd. mica.
R15	200,000 ohms 1 W.	C15	.05 mfd. paper.	C35	.0025 mfd. paper.
R16	20,000 ohms 1 W.	C16	70 mmfd. mica (N).	C36	8 mfd. 450V. electro-lytic.
R17	250,000 ohms 3 W.	C17	70 mmfd. mica (N).	C37	16 mfd. 500V. electro-lytic.
R18	50,000 ohms 1/3 W.	C18	70 mmfd. mica (N).		
R19	390,000 ohms 1/3 W.	C19	.1 mfd. paper.		
R20	50,000 ohms 1/3 W.	C20	.1 mfd. paper.		
R21	250,000 ohms 1/3 W.				

FISK RADIOLA 180 AND 182

5-Valve, One and Two Band, A.C. Operated Superheterodynes

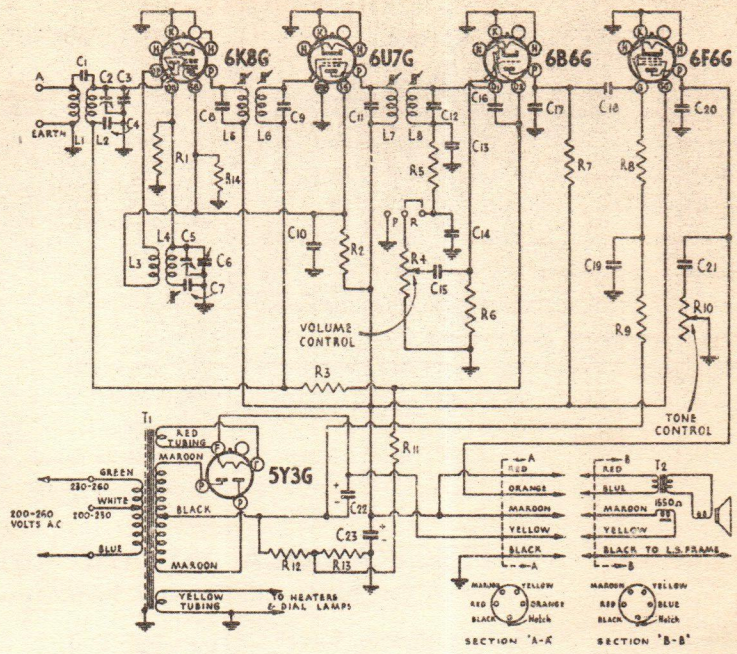
TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (182 only) 16-50M.
R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aerial). "Short Wave" (182 only) - 18M. (Osc. and Aerial).

INTERMEDIATE FREQUENCY - 460 K.C.
POWER CONSUMPTION - 60 Watts.
VALVE COMPLEMENT -

1. 6K8G Frequency Converter
2. 6U7G I.F. Amplifier
3. 6B6G 2nd Det., A.V.C. and A.F. Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.

LOUDSPEAKER - 12 inch Electrodynamic (Dustproof) Field Coil Resistance - 1550 ohms. UNDISTORTED POWER OUTPUT - 3 Watts.

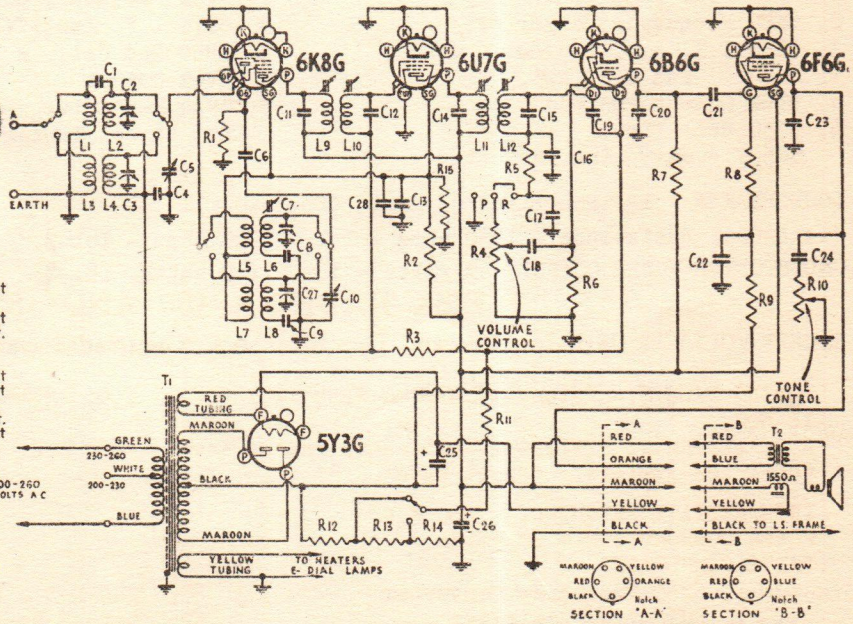
FISK RADIOLA 180 (Contd.)



Code No.	RESISTORS
R1	50,000 ohms, 1/3 watt
R2	11,000 ohms, 3 watt
R3	1.75 megohms, 1/3 watt
R4	500,000 ohms vol. cont.
R5	20,000 ohms, 1/3 watt
R6	10 megohms, 1 watt
R7	250,000 ohms, 1 watt
R8	500,000 ohms, 1/3 watt
R9	25,000 ohms, 1/3 watt
R10	100,000 ohms tone cont.
R11	2.3 megohms, 1/3 watt
R12	250 ohms, 3 watt
R13	80 ohms, 3 watt
R14	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	6-24 mmfd. air trim. Tuning condenser
C3	.05 mfd. paper
C4	11-29 mmfd. air. trim. Tuning condenser
C5	420 mmfd. mica (pad.)
C6	70 mmfd. mica (N)
C7	70 mmfd. mica (N)
C8	.1 mfd. paper
C9	70 mmfd. mica (N)
C10	70 mmfd. mica (N)
C11	110 mmfd. mica (L)
C12	110 mmfd. mica (L)
C13	.01 mfd. paper
C14	50 mmfd. mica (D)
C15	1000 mmfd. mica
C16	.02 mfd. paper
C17	.05 mfd. paper
C18	.0025 mfd. paper
C19	.035 mfd. paper
C20	8 mfd. 500V. electro.
C21	8 mfd. 450V. electro.., with .1 mfd. paper in parallel

FISK RADIOLA 182 (Contd.)



Code No.	RESISTORS
R1	30,000 ohms, 1/3 watt
R2	11,000 ohms, 3 watt
R3	1.75 megohms, 1/3 watt
R4	500,000 ohms vol. cont.
R5	20,000 ohms. 1/3 watt
R6	10 megohms, 1 watt
R7	250,000 ohms, 1 watt
R8	500,000 ohms, 1/3 watt
R9	25,000 ohms, 1/3 watt
R10	100,000 ohms tone cont.
R11	2.3 megohms, 1/3 watt
R12	250 ohms, 3 watt
R13	40 ohms, 3 watt
R14	40 ohms, 3 watt
R15	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-20 mmfd. air trim.
C3	8-26 mmfd. air trim.
C4	.05 mfd. paper
C5	Tuning condenser
C6	70 mmfd. mica (N)
C7	11-29 mmfd. air trim
C8	420 mmfd. mica (pad.)
C9	3500 mmfd. mica (pad.)
C10	Tuning Condenser
C11	70 mmfd. mica (N)
C12	70 mmfd. mica (N)
C13	.1 mfd. paper
C14	70 mmfd. mica (N)
C15	70 mmfd. mica (N)
C16	110 mmfd. mica (L)
C17	110 mmfd. mica (L)
C18	.01 mfd. paper
C19	50 mmfd. mica (D)
C20	1000 mmfd. mica
C21	.02 mfd. paper
C22	.05 mfd. paper
C23	.0025 mfd. paper
C24	.035 mfd. paper
C25	8 mfd. 500V. electro.
C26	8 mfd. 450V. electro., with .1 mfd. paper in parallel
C27	2-10 mmfd. air trim.
C28	8 mfd. 450V. electro.

FISK RADIOLA 180 AND 182 (Contd.)

SOCKET VOLTAGES (180).

Valve.	Bias Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater Volts.
6K8G Detector	—4.7*	100	250	1.0	6.3
Oscillator	—	—	100	3.4	—
6U7G I.F. Amplifier ...	—4.7*	100	250	5.0	6.3
6B6G 2nd Detector	0	—	100*	.56	6.3
6F6G Pentode	—18*	250	232	32	6.3
5Y3G Rectifier	700/350 volts, 58 M.A. Total current				5.0

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

SOCKET VOLTAGES (182).

Valve.		Bias Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater Volts.
6K8G Detector	M.W.	—4.0*	100	250	1.3	6.3
	S.W.	—2.4*	100	250	2.3	—
Oscillator	M.W.	—	—	100	3.5	—
	S.W.	—	—	100	3.3	—
6U7G I.F. Amplifier ...		—4.0*	100	250	5.0	6.3
		—2.4*	100	250	8.0	—
6B6G 2nd Detector ...		0	—	110*	.56	6.3
6F6G Pentode		—18*	250	232	32	6.3
5Y3G Rectifier		700/350 volts, 58 M.A. Total current				5.0

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

FISK RADIOLA 181 AND 181-Z

5-Valve, One Band, A.C. Operated Superheterodynes

TUNING RANGE:- "Standard Medium Wave" - 1600-550 K.C.

R.F. ALIGNMENT SETTINGS: - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aerial).

INTERMEDIATE FREQUENCY - 460 K.C.

POWER CONSUMPTION - 181-60 Watts, 181-Z - 80 Watts.

VALVE COMPLEMENT -

Model 181.

1. 6U7G R.F. Amplifier
2. 6K8G Frequency Converter.
3. 6G8G I.F. Amp, 2nd det., A.V.C. and A.F. Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.

6U5 Visual Tuning Indicator.

Model 181-Z

1. 6A8G Frequency Converter
2. 6U7G I.F. Amplifier
3. 6B8G 2nd det., A.V.C. and A.F.Amp.
4. 6V6G Output
5. 5V4G Rectifier

6U5 Visual Tuning Indicator

LOUDSPEAKER - 12 inch Electrodynamic (Dustproof)

Field Coil Resistance - 1550 ohms - 181, 1700 ohms - 181-Z.

UNDISTORTED POWER OUTPUT - 3 watts - 181, 4.2 watts- 181-Z.

SOCKET VOLTAGES (181).

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amplifier	3†	100	248	5.75	6.3
6K8G Detector	3†	100	248	1.3	6.3
Oscillator	—	—	100	3.3	—
6G8G Reflex	1.3†	20*	180*	0.4	6.3
6F6G Pentode	—17.0‡	248	230	32	6.3
5Y3G Rectifier	700/350 volts, 65 M.A. Total current.				5.0

Voltage across loudspeaker field, 100 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Voltages measured at 240 volts A.C. supply. No signal input. Volume control at maximum clockwise.

SOCKET VOLTAGES (181Z).

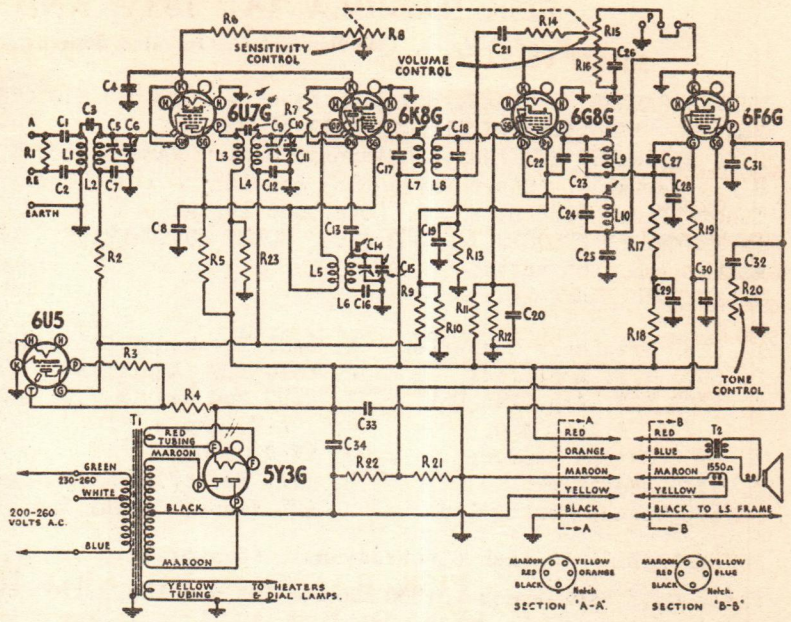
Valve	Cathode Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	4.0	100	265	3.0	6.3
Oscillator	—	—	170	4.5	—
6U7G I.F. Amplifier	5.25	100	250	5.5	6.3
6B8G Detector	1.0	35*	135*	0.5	6.3
6V6G Output	12.5	265	253	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. Total current.				5.0

Voltage across loudspeaker field, 160 volts.

* Cannot be measured with ordinary voltmeter.

Voltages measured at 240 volts A.C. supply. No signal input. Volume control at maximum clockwise.

FISK RADIOLA 181

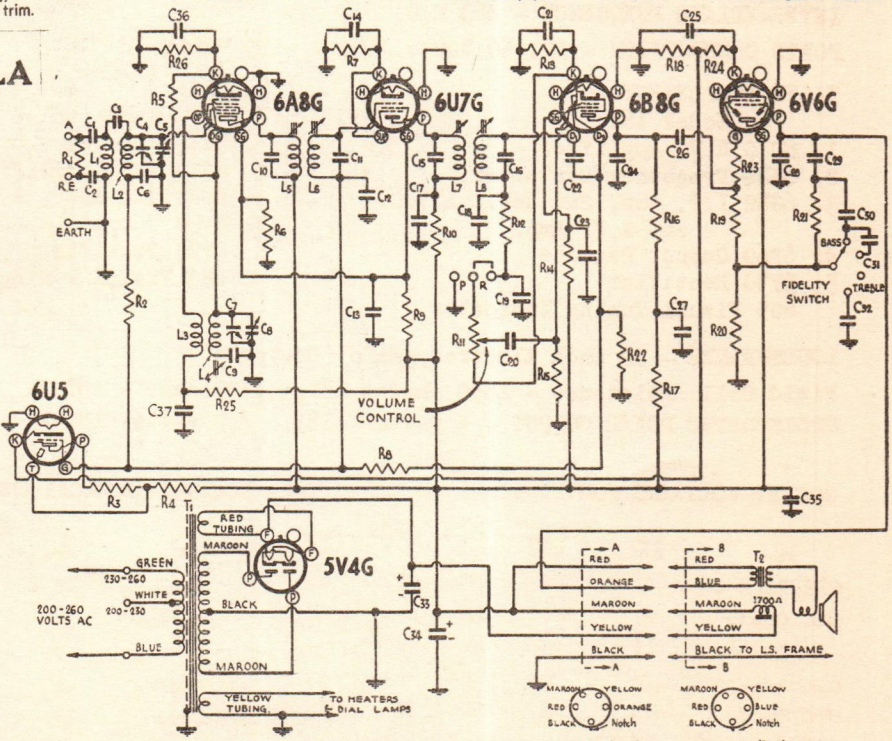


Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	20,000 ohms, 1 watt
R5	11,000 ohms, 3 watt
R6	200 ohms, 1/3 watt
R7	50,000 ohms, 1/3 watt
R8	3000 ohms Sens. Cont.
R9	1.75 megohms, 1/3 watt
R10	2.3 megohms, 1/3 watt
R11	1 megohm, 1 watt
R12	100,000 ohms, 1 watt
R13	2.3 megohms, 1/3 watt
R14	500,000 ohms, 1/3 watt
R15	500,000 ohms Vol. Cont.
R16	3000 ohms, 1/3 watt
R17	150,000 ohms, 1 watt
R18	20,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	100,000 ohms Tone Cont.
R21	20,000 ohms, 1 watt
R22	100,000 ohms, 1 watt
R23	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	.1 mfd. paper
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.1 mfd. paper
C9	4 mmfd. mica
C10	2-20 mmfd. air trim.
C11	Tuning Condenser
C12	.05 mfd. paper
C13	70 mmfd. mica (N)
C14	11-29 mmfd. air trim.

C15	Tuning Condenser	C21	.01 mfd. paper	C28	700 mmfd. mica
C16	420 mmfd. mica (padder)	C22	50 mmfd. mica (D)	C29	.5 mfd. paper
		C25	70 mmfd. mica (N)	C30	25 mfd. 25V. Electro.
C17	70 mmfd. mica (N)	C24	70 mmfd. mica (N)	C31	.0025 mfd. paper
C18	70 mmfd. mica (N)	C25	110 mmfd. mica (L)	C32	.035 mfd. paper
C19	110 mmfd. mica (L)	C26	25 mfd. 25V. Electro.	C33	8 mfd. 450V. Electro.
C20	.1 mfd. paper	C27	.02 mfd. paper	C34	8 mfd. 500V. Electro.

FISK RADIOLA 181Z



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	20,000 ohms, 1 watt
R5	50,000 ohms, 1/3 watt
R6	20,000 ohms, 2 watt
R7	800 ohms, 1/3 watt
R8	1.75 megohms, 1/3 watt
R9	11,000 ohms, 3 watt
R10	3,000 ohms, 1 watt
R11	500,000 ohms, Vol. Cont.
R12	20,000 ohms, 1/3 watt
R13	2,000 ohms, 1/3 watt
R14	3 megohms, 1 watt
R15	1.75 megohms, 1/3
R16	250,000 ohms, 1
R17	20,000 ohms, 1
R18	50 ohms, 3 watt
R19	390,000 ohms, 1/3
R20	50,000 ohms, 1/3
R21	250,000 ohms, 1/3
R22	2.3 megohms, 1/3
R23	50,000 ohms, 1/3
R24	200 ohms, 3 watt
R25	20,000 ohms, 1 watt
R26	350 ohms, 1/3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	Tuning condenser
C6	.05 mfd. paper
C7	11-29 mmfd. air trim.
C8	Tuning condenser
C9	420 mmfd. mica (pad.)
C10	70 mmfd. mica (N)
C11	70 mmfd. mica (N)
C12	.05 mfd. paper
C13	.1 mfd. paper
C14	.1 mfd. paper
C15	70 mmfd. mica (N)
C16	70 mmfd. mica (N)
C17	.05 mfd. paper
C18	110 mmfd. mica (L)
C19	110 mmfd. mica (L)

C20	.01 mfd. paper	C26	.02 mfd. paper	C32	2000 mmfd. mica
C21	25 mfd. 25V. electro.	C27	.5 mfd. paper	C33	16 mfd. 500V. electro.
C22	50 mmfd. mica (D)	C28	.0025 mfd. paper	C34	16 mfd. 500V. electro.
C23	.1 mfd. paper	C29	.05 mfd. paper	C35	.1 mfd. paper
C24	110 mmfd. mica (L)	C30	1500 mmfd. mica	C36	.05 mfd. paper
C25	25 mfd. 25V. electro.	C31	700 mmfd. mica	C37	.1 mfd. paper

FISK RADIOLA 183, 183-Z AND 188

5 and 6-Valve, Two Band, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (183 and 188) - 16-50M. "Short Wave" (183-Z) - 13.65-46M.
R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. R.F., Aerial). "Short Wave" (183 and 188) - 18M. (Osc., R.F., Aerial).
"Short Wave" (183-Z) - 15M. (Osc. and Aerial).
INTERMEDIATE FREQUENCY - 460 K.C. POWER CONSUMPTION - 183 - 60 watts, 183-Z - 80 watts, 188 - 65 watts.
VALVE COMPLEMENT

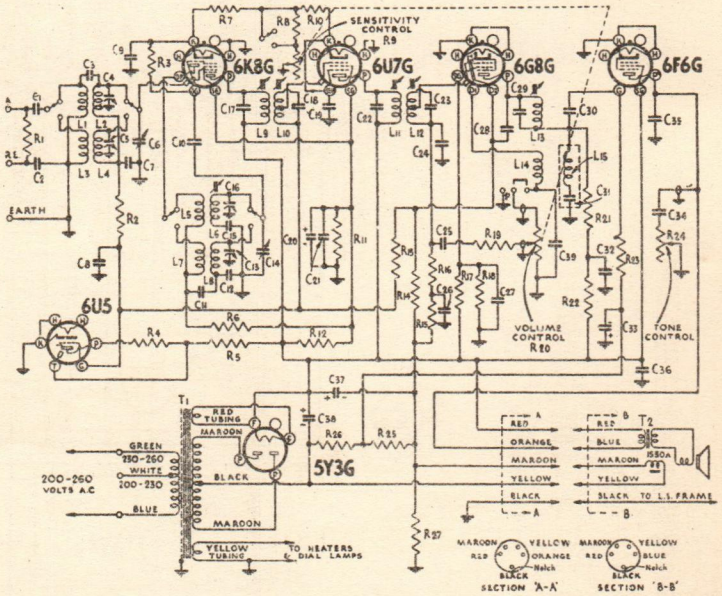
1. 6K8G Frequency Converter	1. 6A8G Frequency Converter.	1. 6U7G R.F. Amplifier
2. 6U7G I.F. Amplifier	2. 6U7G I.F. Amplifier	2. 6K8G Freq. Convert/
3. 6G8G I.F. Amp.,2nd Det., A.V.C. & A.F. Amp.	3. 6B8G 2nd det.,A.V.C. & A.F. Amp.	3. 6U7G I.F. Amplifier
4. 6F6G Output Pentode	4. 6V6G Output	4. 6G8G 2nd Det.,A.V.C. & A.F. Amp.
5. 5Y3G Rectifier	5. 5V4G Rectifier	5. 6F6G Output Pentode
6U5 Visual Tuning Ind.	6U5 Visual Tuning Ind.	6U5 Visual Tuning Ind.

LOUDSPEAKER - 12 inch electrodynamic (dustproof).

Field Coil Resistance - 1550 ohms - 183 and 188, 1700 ohms - 183-Z

UNDISTORTED POWER OUTPUT - 3 watts - 183 and 188, 4.2 watts - 183-Z.

FISK RADIOLA 183



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	50,000 ohms, 1/3 watt
R4	1 megohm, 1 watt
R5	20,000 ohms, 1 watt
R6	600 ohms, 1/3 watt
R7	200 ohms, 1/3 watt
R8	100 ohms, 1/3 watt
R9	3000 ohms sens. cont.
R10	200 ohms, 1/3 watt
R11	20,000 ohms, 1 watt
R12	11,000 ohms, 3 watt
R13	1.75 megs., 1/3 watt
R14	2.3 megohms, 1/3 watt
R15	300,000 ohms, 1/3 watt
R16	2.3 megohms, 1/3 watt
R17	1 megohm, 1 watt
R18	100,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	500,000 ohms Vol. Cont.
R21	150,000 ohms, 1 watt
R22	20,000 ohms, 1 watt
R23	500,000 ohms, 1/3 watt
R24	100,000 ohms Tone Cont.
R25	20,000 ohms, 1 watt
R26	100,000 ohms, 1 watt
R27	20 ohms, 3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.05 mfd. paper
C9	.05 mfd. paper
C10	70 mmfd. mica (N)
C11	.05 mfd. paper
C12	3500 mmfd. mica (pad.)
C13	2-10 mmfd. air trim.
C14	Tuning Condenser
C15	420 mmfd. mica (pad.)
C16	11-29 mmfd. air trim.
C17	115 mmfd. mica (A)
C18	130 mmfd. mica (H)
C19	.05 mfd. paper
C20	8 mfd. 450V. electro.
C21	.1 mfd. paper
C22	115 mmfd. mica (A)
C23	130 mmfd. mica (H)
C24	110 mmfd. mica (L)
C25	.01 mfd. paper
C26	.1 mfd. paper
C27	.1 mfd. paper
C28	50 mmfd. mica (D)
C29	70 mmfd. mica (N)
C30	.02 mfd. paper
C31	115 mmfd. mica (A)
C32	.5 mfd. paper
C33	25 mfd. 25V. electro.
C34	.035 mfd. paper
C35	.0025 mfd. paper
C36	.1 mfd. paper
C37	16 mfd. 500V. electro.
C38	16 mfd. 500V. electro.
C39	110 mmfd. mica (L)

SOCKET VOLTAGES (183).

Valve	Bias Voltages		Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector						
M.W.	—1.4‡	3.4†	100	250	1.5	6.3
S.W.	—1.4‡	1.8†	100	250	2.0	—
Oscillator	—	—	—	100	2.5	—
6U7G I.F. Amp.						
M.W.	—1.4‡	3.2†	100	250	6.0	6.3
S.W.	—1.4‡	1.8†	100	250	7.5	—
6C8G Reflex Amp.	— 1.4		18*	165*	0.5	6.3
6F6G Pentode	—17.0		250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 M.A. Total Current.					5.0

Voltage across loudspeaker field, 100 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control Grid to Chassis. Cannot be measured with ordinary voltmeter.

† Cathode to Chassis.

Measured at 240 volts A.C. supply. No signal input.
Volume Control at maximum.

SOCKET VOLTAGES (183-Z).

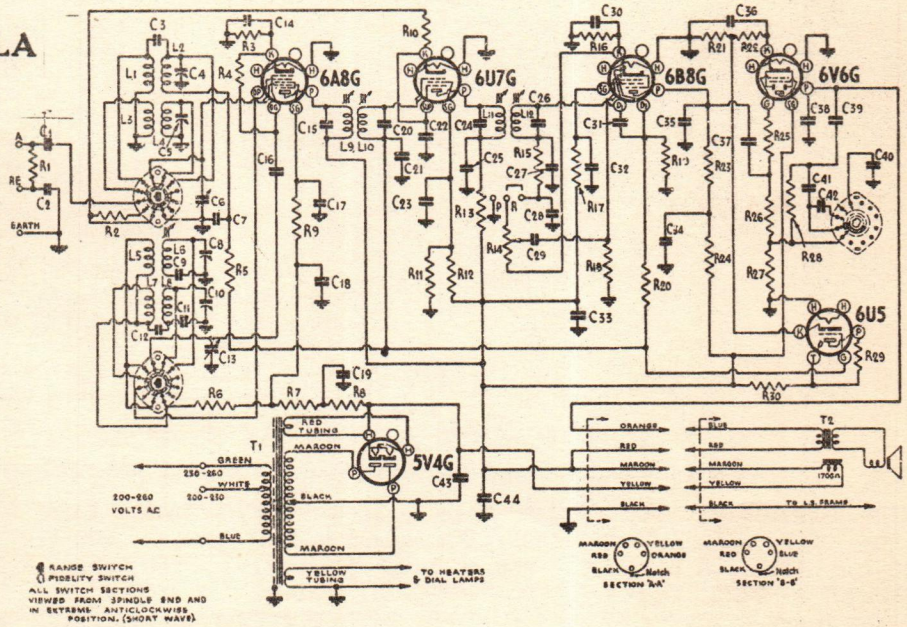
Valve	Catnode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	5.0	100	268	3.5	6.3
Oscillator	—	—	150	5.0	—
6U7G I.F. Amp.					
M.W.	5.8	100	250	5.0	6.3
S.W.	4.0	100	243	7.0	—
6B8G 2nd Det.	1.0	35*	135*	0.45	6.3
6V6G Output	12.5	268	255	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. Total Current.				5.0

Voltage across loudspeaker field, 150 volts.

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input.
Volume Control at maximum.

FISK RADIOLA 183Z



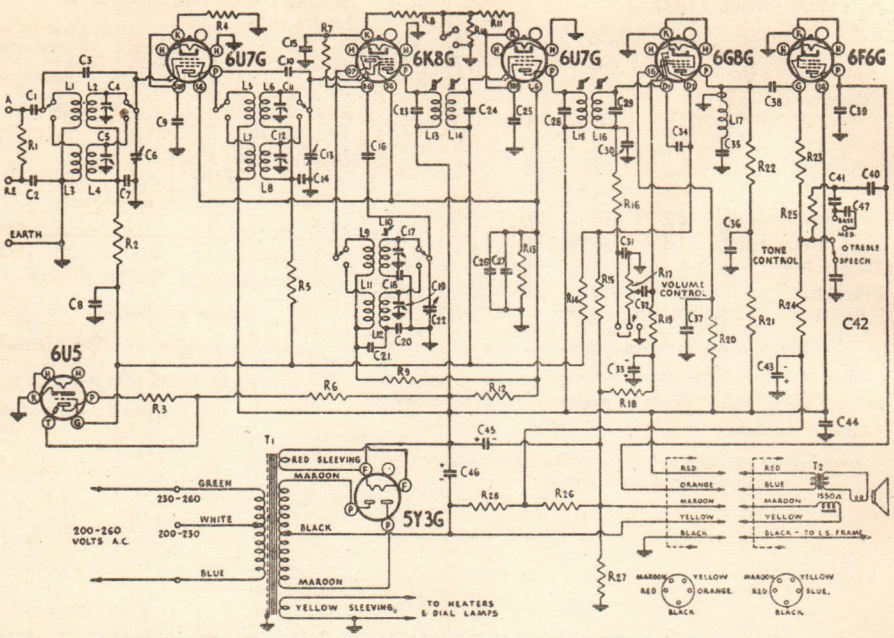
Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	400 ohms, 1/3 watt
R3	400 ohms, 1/3 watt
R4	50,000 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	10,000 ohms, 1 watt
R7	10,000 ohms, 1 watt
R8	10,000 ohms, 1 watt
R9	50,000 ohms 1 watt
R10	400 ohms, 1/3 watt
R11	10,000 ohms, 2 watt
R12	14,000 ohms, 3 watt
R13	3,000 ohms, 1 watt
R14	500,000 ohms Vol. Cont.
R15	20,000 ohms 1/3 watt
R16	2,000 ohms, 1/3 watt
R17	3 meg., 1 watt
R18	1.75 megs., 1/3 watt
R19	2.3 megs., 1/3 watt
R20	1.75 megs., 1/3 watt
R21	50 ohms, 3 watt
R22	200 ohms, 3 watt
R23	250,000 ohms, 1 watt
R24	20,000 ohms, 1 watt
R25	50,000 ohms, 1/3 watt
R26	390,000 ohms, 1/3 watt
R27	50,000 ohms, 1/3 watt
R28	250,000 ohms, 1/3 watt
R29	1 meg., 1 watt
R30	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	11-29 mmfd. air trim.
C9	440 mmfd. (padder)
C10	2-10 mmfd. air trim.
C11	3500 mmfd. mica (pad.)
C12	.05 mfd. paper
C13	Tuning Condenser
C14	.05 mfd. paper
C15	70 mmfd. mica (N)
C16	70 mmfd. mica (N)
C17	.1 mfd. paper
C18	8 mfd. 450V. electro
C19	8 mfd. 450V. electro.
C20	79 mmfd. mica
C21	.05 mfd. paper
C22	.1 mfd. paper
C23	.1 mfd. paper
C24	70 mmfd. mica (N)
C25	.05 mfd. paper
C26	70 mmfd. mica (N)
C27	110 mmfd. mica (L)
C28	110 mmfd. mica (L)
C29	.01 mfd. paper
C30	25 mfd. 25V. electro.
C31	50 mmfd. mica (D)
C32	.1 mfd. paper
C33	.1 mfd. paper
C34	.5 mfd. paper
C35	110 mmfd. mica (L)
C36	25 mfd. 25V. electro
C37	.02 mfd. paper
C38	.0025 mfd. paper
C39	.05 mfd. paper
C40	2000 mmfd. mica
C41	1500 mmfd. mica
C42	700 mmfd. mica
C43	16 mfd. 500V. electro.
C44	16 mfd. 500V. electro.

FISK RADIOLA 188

Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	200 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	20,000 ohms, 1 watt
R7	50,000 ohms, 1/3 watt
R8	200 ohms, 1/3 watt
R9	600 ohms, 1/3 watt
R10	300 ohms, 1/3 watt
R11	200 ohms, 1/3 watt
R12	11,000 ohms, 3 watt
R13	20,000 ohms, 1 watt
R14	1.75 megs., 1/3 watt
R15	2.3 megs., 1/3 watt
R16	20,000 ohms, 1/3 watt
R17	500,000 ohms Vol. Cont.
R18	300,000 ohms, 1/3 watt
R19	2.3 megohms, 1/3 watt
R20	1 megohm, 1 watt
R21	20,000 ohms, 1 watt
R22	200,000 ohms, 1 watt
R23	400,000 ohms, 1/3 watt
R24	50,000 ohms, 1/3 watt
R25	250,000 ohms, 1/3 watt
R26	20,000 ohms, 1 watt
R27	20 ohms, 3 watt
R28	100,000 ohms, 1 watt

Code No.	CONDENSERS.
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.05 mfd. paper
C9	.1 mfd. paper
C10	4 mmfd. mica
C11	2-20 mmfd. air trim.
C12	2-20 mmfd. air trim.
C13	Tuning Condenser
C14	.05 mfd. paper
C15	.05 mfd. paper
C16	70 mmfd. mica (N)
C17	11-29 mmfd. air trim.
C18	420 mmfd. mica (pad.)
C19	2-10 mmfd. air trim.
C20	3,500 mmfd. mica (padder)
C21	.05 mfd. paper
C22	Tuning Condenser
C23	70 mmfd. mica (N)
C24	79 mmfd. mica
C25	.05 mfd. paper
C26	8 mfd. 450V. electro.
C27	.1 mfd. paper
C28	70 mmfd. mica (N)
C29	70 mmfd. mica (N)
C30	110 mmfd. mica (L)
C31	110 mmfd. mica (L)
C32	.02 mfd. paper
C33	25 mfd. 25V. electro.
C34	50 mmfd. mica (D)
C35	115 mmfd. mica (A)
C36	.5 mfd. paper
C37	.1 mfd. paper
C38	.02 mfd. paper
C39	.0025 mfd. paper
C40	.05 mfd. paper
C41	1000 mmfd. mica
C42	2000 mmfd. mica
C43	25 mfd. 25V. electro.
C44	.1 mfd. paper
C45	16 mfd. 500V. electro.
C46	16 mfd. 500V. electro.
C47	700 mmfd. mica



Valve	Bias Voltages		Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amp.	—1.3‡	1.5†	90	260	7.25	6.3
6K8G Detector	—1.3‡	5.5†	90	260	2.0	6.3
Oscillator	—	—	—	90	3.5	—
6U7G I.F. Amp.	—1.3‡	4.5†	90	260	5.0	6.3
6G8G 2nd Det.	—1.3‡		20*	40*	0.95	6.3
6F6G Output	—16.5‡		260	248	30.0	6.3
5Y3G Rectifier	710/355 volts, 63 M.A. Total Current.					5.0

Voltage across loudspeaker field, 110 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control Grid to Chassis. Cannot be measured with ordinary voltmeter.

† Cathode to Chassis.

Measured at 240 volts A.C. supply. No signal input.
Volume and Fidelity Controls in extreme clockwise positions.

FISK RADIOLA 184, 185 AND 186

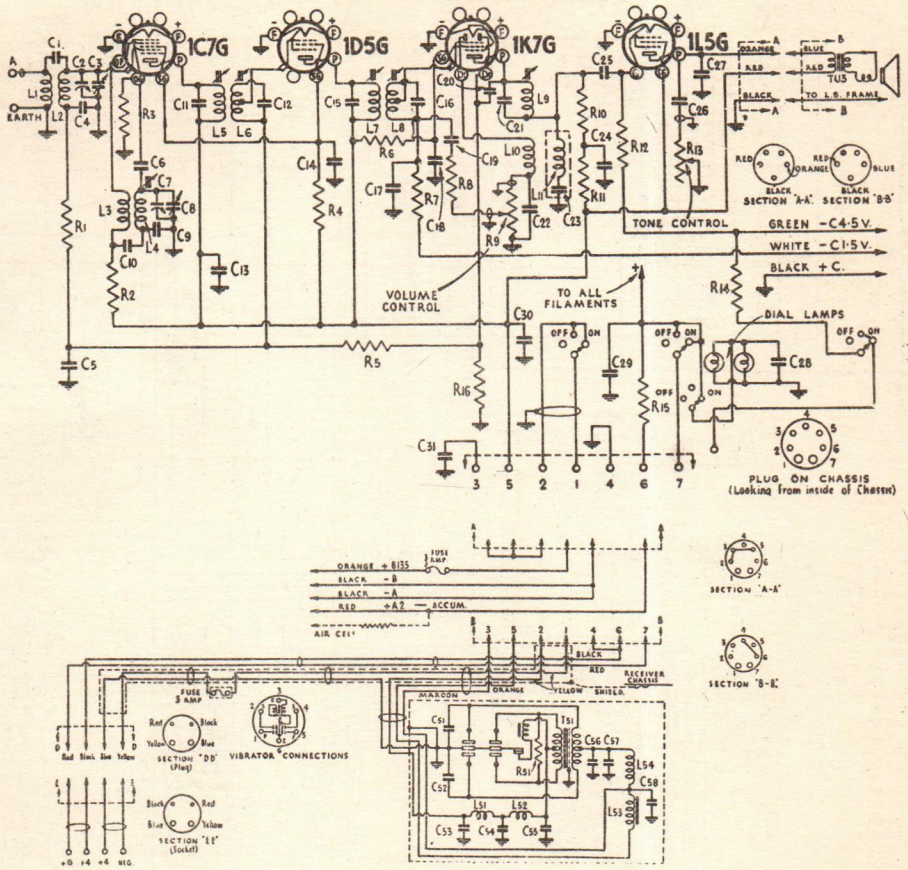
4 and 5-Valve, One and Two Band, Battery Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (186 only) - 16-50M. R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave," - 600 K.C. (Osc.), 1500 K.C. (Osc., R.F., Aer.). "Short Wave" (186 only) - 18M. (Osc.,R.F.,Aer.).
INTERMEDIATE FREQ.- 460 K.C.

CURRENT CONSUMPTION	"B" BATTERY OPERATION	VIBRATOR OPERATION
"A" Battery at 2 volts (184)	0.54 Amp.	
"A" Battery at 2 volts (185 & 186)	0.60 Amp.	
"A" Battery 6 volts		1.2 Amps.
"B" Battery at 135 volts (184)	14 M.A.	(Supplied from Vibrator power Unit)
"B" Battery at 135 volts '185 & 186)	17 M.A.	" " " "
REPLACEMENT FUSE	3/8 Amp.	3 Amp.

VALVE COMPLEMENT - MODEL 184 - 1C7G Freq. Converter, 1D5G I.F. Amp. 1K7G I F. Amp. 2nd Det.,A.V.C. & A.F.Amp. 1L5G Output Pentode. MODELS 185 & 186 - 1D5G R.F.Amp. 1C7G Freq. Conv. 1D5G I.F.Amp. 1K7G 2nd det.A.V.C.&A.F.Amp. 1L5G Output Pentode.
LOUDSPEAKER - (Permanent Magnet) UNDISTORTED POWER OUTPUT - 350 milliwatts.

FISK RADIOLA 184 (Contd.)



R3	60,000 ohms, 1/3 watt	C2	2-10 mmfd. air trim.	C21	70 mmfd. mica (N)
R4	70,000 ohms, 1 watt	C3	Tuning Condenser	C22	110 mmfd. mica (L)
R5	1.75 megs., 1/3 watt	C4	.05 mfd. paper	C23	700 mmfd. mica
R6	500,000 ohms, 1 watt	C5	.05 mfd. paper	C24	.5 mfd. paper
R7	1.75 megs., 1/3 watt	C6	110 mmfd. mica (L)	C25	.05 mfd. paper
R8	500,000 ohms, 1/3 watt	C7	11-29 mmfd. air trim.	C26	.035 mfd. paper
R9	500,000 ohms Vol. Cont.	C8	Tuning Condenser	C27	.0025 mfd. paper
R10	100,000 ohms, 1 watt	C9	420 mmfd. mica (pad.)	C28	.5 mfd. paper
R11	20,000 ohms, 1 watt	C10	.05 mfd. paper	C29	450 mmfd. mica
R12	500,000 ohms, 1/3 watt	C11	115 mmfd. mica (A)	C30	8 mfd. 450V. Electro
R13	100,000 ohms Tone Cont.	C12	130 mmfd. mica (H)	C31	450 mmfd. mica
R14	750 ohms, 1 watt	C13	.1 mfd. paper	C51	.01 mfd. paper
R15	4.5 ohms wire wound	C14	.1 mfd. paper	C52	.01 mfd. paper
R16	2.3 megs., 1/3 watt	C15	115 mmfd. mica (A)	C53	.1 mfd. paper
R51	400 ohms, 1/3 watt	C16	130 mmfd. mica (H)	C54	.25 mfd. paper
Code No.	CONDENSERS	C17	110 mmfd. mica (L)	C55	.25 mfd. paper
C1	4 mmfd. mica	C18	.1 mfd. paper	C56	8 mfd., 450V. Electro
		C19	.02 mfd. paper	C57	.02 mfd. paper
		C20	50 mmfd mica (D)	C58	.5 mfd. paper

SOCKET VOLTAGES (184).

Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G Det. Oscillator	0	35	135	1.0	2.0
1D5G I.F. Amplifier .	—	—	60	1.5	—
1K7G Reflex Amp. .	—1.5*	80*	85*	0.4	2.0
1L5G Pentode	—4.5*	135	130	6.5	2.0

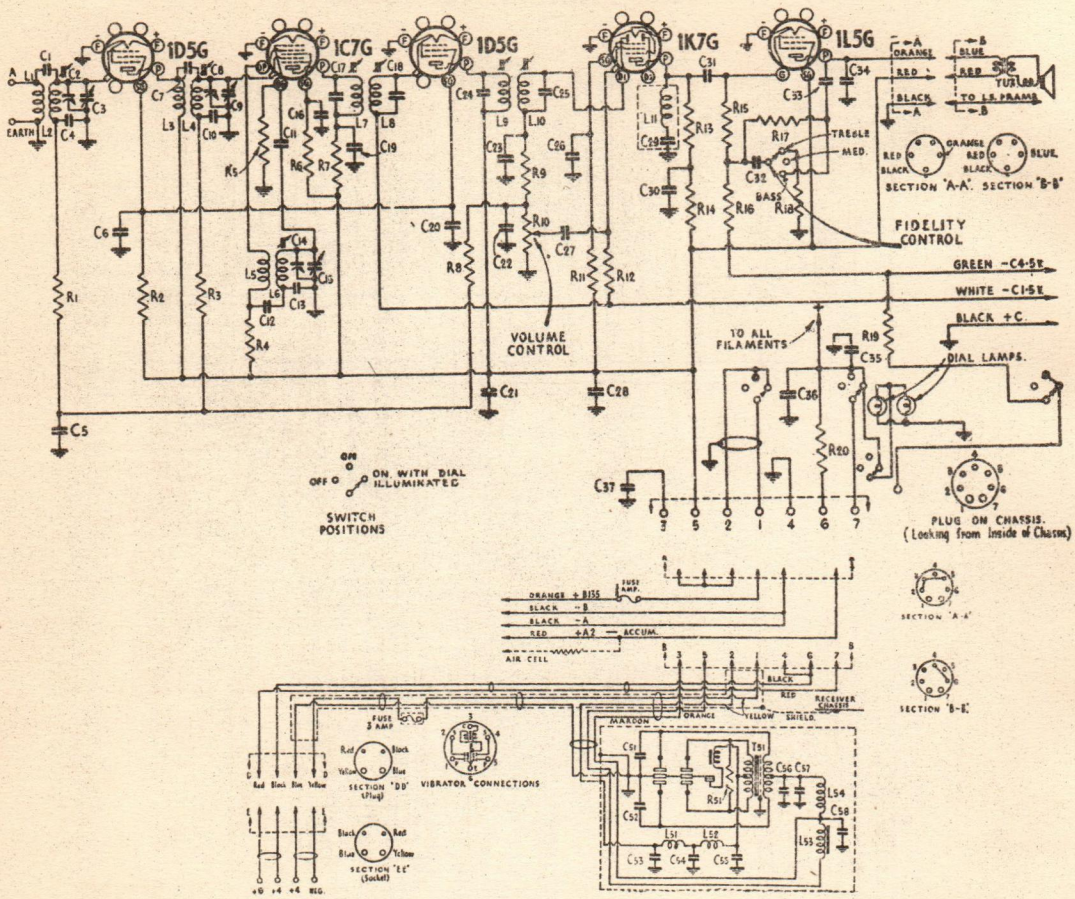
* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

SOCKET VOLTAGES (185).

Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier	—	32	135	1.2	2.0
1C7G Detector	—	55	135	3.0	2.0
Oscillator	—	—	48	1.3	—
1D5G I.F. Amplifier .	—1.5*	32	135	.76	2.0
1K7G 2nd Detector .	—1.5*	35*	65*	.25	2.0
1L5G Pentode	—4.5*	135	130	7	2.0

* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

FISK RADIOLA 185 (Contd.)



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	150,000 ohms, 1 watt
R3	100,000 ohms, 1/3 watt
R4	50,000 ohms, 1 watt
R5	60,000 ohms, 1/3 watt
R6	40,000 ohms, 1 watt
R7	300 ohms, 1/3 watt
R8	1.75 megohms, 1/3 watt
R9	50,000 ohms, 1/3 watt
R10	500,000 ohms Vol. Cont.
R11	1 megohm, 1 watt
R12	1.75 megs., 1/3 watt
R13	200,000 ohms, 1 watt
R14	50,000 ohms, 1 watt
R15	400,000 ohms, 1/3 watt
R16	100,000 ohms, 1/3 watt
R17	200,000 ohms, 1/3 watt
R18	15,000 ohms, 1/3 watt
R19	600 ohms, 1 watt
R20	4.5 ohms wire wound
R51	400 ohms, 1/3 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-20 mmfd. air trim
C3	Tuning Condenser
C4	.05 mfd. paper
C5	.05 mfd. paper
C6	.1 mfd. paper
C7	4 mmfd. mica
C8	2-20 mmfd. air trim
C9	Tuning Condenser
C10	.05 mfd. paper
C11	110 mmfd. mica (L)
C12	.05 mfd. paper
C13	420 mmfd. mica (pad.)
C14	11-29 mmfd. air trim.
C15	Tuning Condenser
C16	.1 mfd. paper
C17	70 mmfd. mica (N)
C18	70 mmfd. mica (N)
C19	.1 mfd. paper
C20	.1 mfd. paper
C21	8 mfd. 450V. Electro
C22	110 mmfd. mica (L)
C23	110 mmfd. mica (L)
C24	70 mmfd. mica (N)
C25	70 mmfd. mica (N)
C26	.1 mfd. paper
C27	.01 mfd. paper
C28	.1 mfd. paper
C29	115 mmfd. mica (A)
C30	.5 mfd. paper
C31	.02 mfd. paper
C32	.002 mfd. paper
C33	.05 mfd. paper
C34	.0025 mfd. paper
C35	450 mmfd. mica
C36	.5 mfd. paper
C37	450 mmfd. mica
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd., 450V. Electro
C57	.02 mfd. paper
C58	.5 mfd. paper

SOCKET VOLTAGES. 186

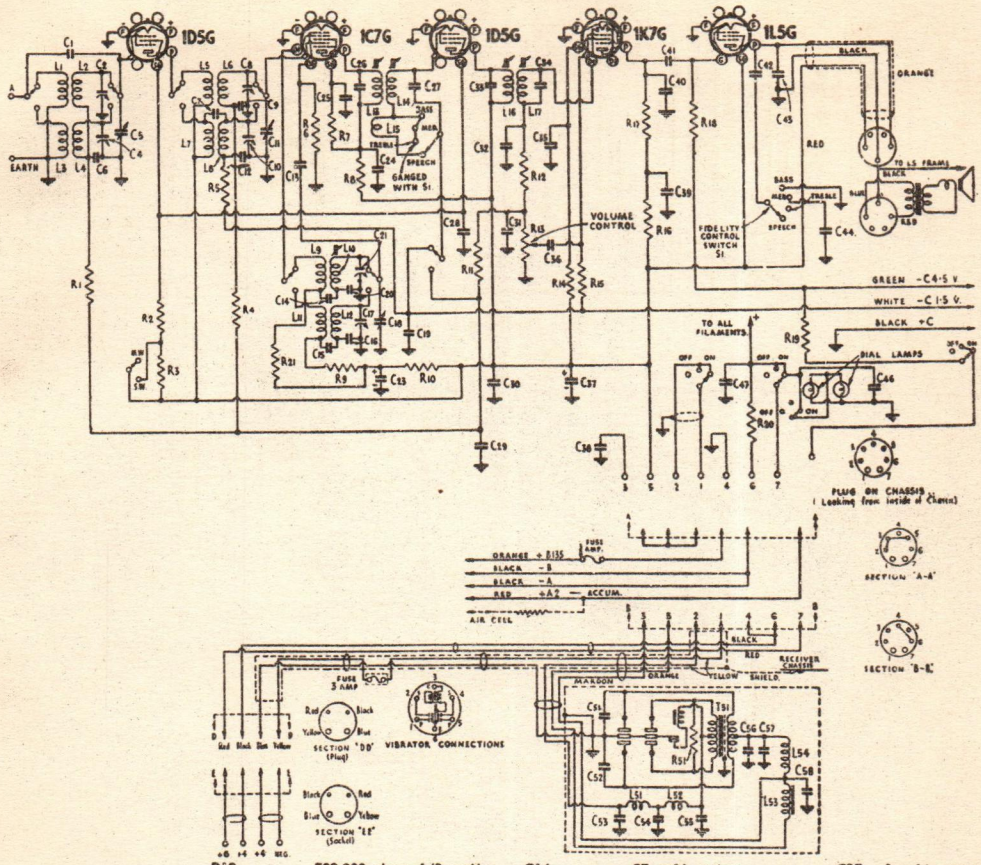
Valve		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier						
	M.W.	0	37	135	1.5	2.0
	S.W.	0	40	135	1.8	—
1C7G Detector						
	M.W.	0	55	135	2.4	2.0
	S.W.	—1.5*	55	135	3.2	—
Oscillator						
	M.W.	—	—	72	1.4	
	S.W.	—	—	110	4.0	

Valve		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G I.F. Amplifier						
	M.W.	1.5	37	135	1.1	2.0
	S.W.	0	40	135	2.0	—
1K7G Reflex Amp. .		—1.5*	42*	69.5*	.22	2.0
1L5G Pentode		—4.5*	135	131	5.5	2.0

* Cannot be measured with ordinary voltmeter.

Measured with volume control at maximum. No signal.

FISK RADIOLA 186 (Contd.)



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	70,000 ohms, 1 watt
R3	50,000 ohms, 1 watt
R4	100,000 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	60,000 ohms, 1/3 watt
R7	40,000 ohms, 1 watt
R8	300 ohms, 1/3 watt
R9	400 ohms, 1/3 watt
R10	6,500 ohms, 1 watt
R11	1.75 megs., 1/3 watt
R12	60,000 ohms, 1/3 watt
R13	500,000 ohms Vol. Cont.
R14	1 megohm, 1 watt
R15	1.75 megs., 1/3 watt
R16	50,000 ohms, 1 watt
R17	200,000 ohms, 1 watt
R18	500,000 ohms, 1/3 watt
R19	600 ohms, 1 watt
R20	4.5 ohms, wire wound
R21	40,000 ohms, 1 watt
R51	400 ohms, 1/3 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-20 mmfd. air trim
C3	Deleted
C4	2-20 mmfd. air trim.
C5	Tuning Condenser
C6	.05 mfd. paper
C7	4 mmfd. mica
C8	2-10 mmfd. air trim.
C9	05 mfd. paper
C10	2-10 mmfd. air trim.
C11	Tuning Condenser
C12	.05 mfd. paper
C13	110 mmfd. mica (L)
C14	.05 mfd. paper
C15	.05 mfd. paper
C16	3500 mmfd. mica (pad.
C17	2-10 mmfd. air trim.
C18	Tuning Condenser
C19	Deleted
C20	420 mmfd. mica (pad.
C21	11-29 mmfd. air trim.
C22	Deleted
C23	8 mfd. 450V. Electro.
C24	.1 mfd. paper
C25	.1 mfd. paper
C26	70 mmfd. mica (N)
C27	70 mmfd. mica (N)
C28	.1 mfd. paper
C29	.05 mfd. paper
C30	.1 mfd. paper
C31	110 mmfd. mica (L)
C32	110 mmfd. mica (L)
C33	70 mmfd. mica (N)
C34	70 mmfd. mica (N)
C35	.1 mfd. paper
C36	.02 mfd. paper
C37	8 mfd. 450V. Electro
C38	450 mmfd. mica
C39	.5 mfd. paper
C40	110 mmfd. mica (L)
C41	.05 mfd. paper
C42	.01 mfd. paper
C43	.0025 mfd. paper
C44	.005 mfd. paper
C45	Deleted
C46	450 mmfd. mica
C47	.5 mfd. paper
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd., 450V. Electro
C57	.02 mfd. paper
C58	.5 mfd. paper

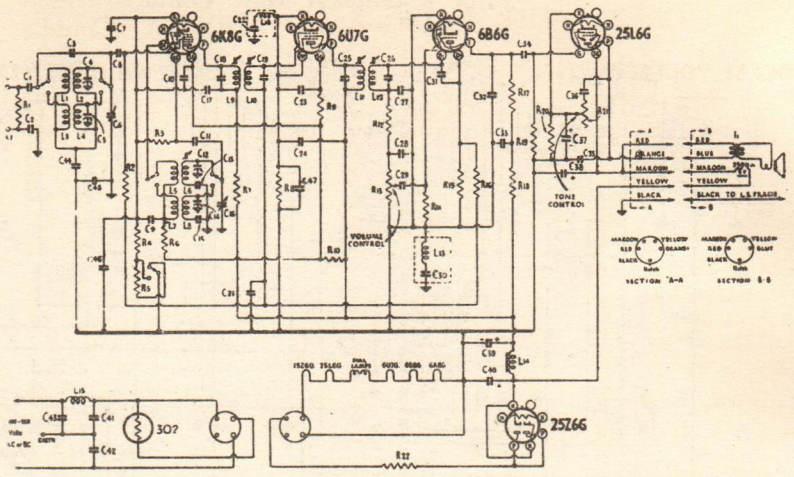
FISK RADIOLA 187 AND 271

5 AND 6 Valve, Two Band, Universal A C. - D.C. Operated Superheterodynes
TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" - 16-50M.
R.F. ALIGNMENT SETTINGS (271) - "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc.,R.F. and Aerial). "Short Wave" - 18M. (Osc., R.F. and Aerial).
INTERMEDIATE FREQ. - 460 K.C. UNDISTORTED POWER OUTPUT - 2.2 watts
LOUDSPEAKER - 12 inch Type. Field Coil Res.- 2500 ohms. Dial Lamps(2)-3.2V, .35 amp

VALVE COMPLEMENT - (187.)
6K8G Frequency Converter
6U7G I.F. Amplifier
6B6G 2nd det. .A.V.C.& A.F. Amp.
25L6G Output
25Z6G Rectifier
302 Barretter

VALVE COMPLEMENT- (271)
6U7G R.F. Amplifier
6K8G Frequency Converter
6U7G I.F. Amplifier
6B8G 2nd Det.,A.V.C. and A.F. Amp.
25L6G Output - 25Z6G Rectifier. 302 - Barretter. 6U5 Visual Tuning Indicator

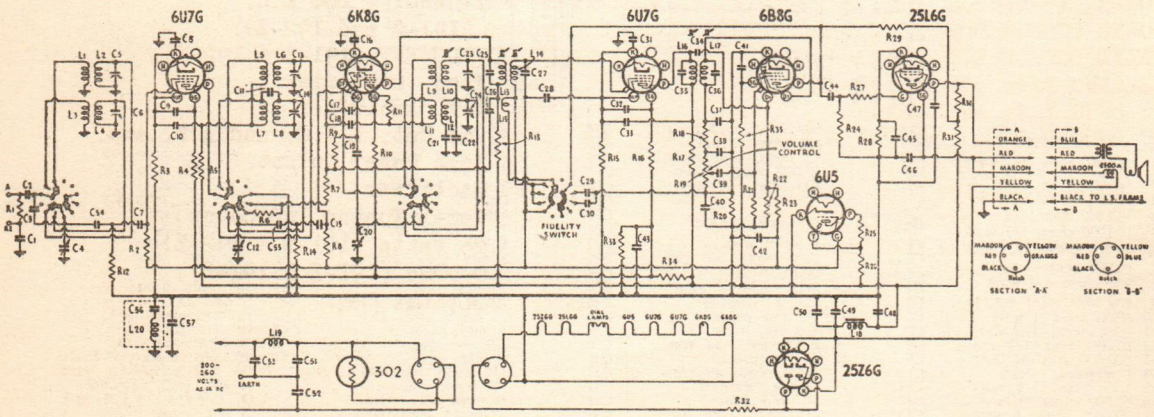
FISK RADIOLA 187



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	500,000 ohms, 1/3 watt
R3	30,000 ohms, 1/3 watt
R4	200 ohms, 1/3 watt
R5	200 ohms, 1/3 watt
R6	600 ohms, 1/3 watt
R7	600 ohms, 1/3 watt
R8	600 ohms, 1/3 watt
R9	600 ohms, 1/3 watt
R10	11,000 ohms, 3 watt
R11	Deleted
R12	60,000 ohms, 1/3 watt
R13	500,000 ohms Vol. Cont.
R14	10 megohms, 1 watt
R15	2.3 megohms, 1/3 watt
R16	1.75 megohms, 1/3 watt
R17	200,000 ohms, 1 watt
R18	50,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	150 ohms, 3 watt
R21	100,000 ohms Tone Cont.
R22	100 ohms, 3 watt
R23	600 ohms, 1/3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.02 mfd. paper
C8	350 mmfd. mica
C9	.05 mfd. paper
C10	.1 mfd. paper
C11	70 mmfd. mica (N)
C12	11-29 mmfd. air trim.
C13	420 mmfd. mica (pad.)
C14	2-10 mmfd. air trim.
C15	3500 mmfd. mica (pad.)
C16	Tuning Condenser
C17	.1 mfd. paper
C18	70 mmfd. mica (N)
C19	70 mmfd. mica (N)
C20	Deleted
C21	.05 mfd. paper
C22	3500 mfd. mica
C23	.1 mfd. paper
C24	.1 mfd. paper
C25	70 mmfd. mica (N)
C26	70 mmfd. mica (N)
C27	110 mmfd. mica (L)
C28	110 mmfd. mica (L)
C29	.01 mfd. paper
C30	3500 mmfd. mica
C31	50 mmfd. mica (D)
C32	1000 mmfd. mica
C33	.5 mfd. paper
C34	.02 mfd. paper
C35	.005 mfd. paper
C36	.035 mfd. paper
C37	25 mfd. 25V. electro.
C38	8 mfd. 450V. electro.
C39	16 mfd. 450V. electro.
C40	8 mfd. 450V. electro.
C41	.1 mfd. paper
C42	.1 mfd. paper
C43	.1 mfd. paper
C44	.1 mfd. paper
C45	.05 mfd. paper
C46	.1 mfd. paper
C47	.1 mfd. paper
C48	.1 mfd. paper

FISK RADIOLA 271



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	500,000 ohms, 1/3 watt
R3	400 ohms, 1/3 watt
R4	900 ohms, 1/3 watt
R5	600 ohms, 1/3 watt
R6	200 ohms, 1/3 watt
R7	300 ohms, 1/3 watt
R8	500,000 ohms, 1/3 watt
R9	50,000 ohms, 1/3 watt
R10	900 ohms, 1/3 watt
R11	600 ohms, 1/3 watt
R12	500,000 ohms, 1/3 watt
R13	600 ohms, 1/3 watt
R14	500,000 ohms, 1/3 watt
R15	400 ohms, 1/3 watt
R16	900 ohms, 1/3 watt
R17	600 ohms, 1/3 watt
R18	100,000 ohms, 1/3 watt
R19	500,000 ohms Vol. Cont.
R20	2000 ohms, 1/3 watt
R21	1.0 megohm, 1/3 watt
R22	1.75 megohm, 1/3 watt
R23	1.75 megohm, 1/3 watt
R24	500,000 ohms, 1/3 watt
R25	1.0 megohm, 1 watt
R26	20,000 ohms, 1 watt
R27	100,000 ohms, 1/3 watt
R28	150 ohms, 3 watt
R29	200,000 ohms, 1 watt
R30	100,000 ohms, 1 watt
R31	20,000 ohms, 1 watt
R32	100 ohms, 3 watt
R33	15,000 ohms, 2 watt
R34	5,000 ohms, 5 watt
R35	1.0 megohm, 1 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	Tuning Condenser
C5	2-20 mmfd. air trim.
C6	2-20 mmfd. air trim.
C7	350 mmfd. mica
C8	.01 mfd. paper
C9	.1 mfd. paper
C10	.1 mfd. paper
C11	6 mmfd. mica (F)
C12	Tuning Condenser
C13	2-20 mmfd. air trim.
C14	2-20 mmfd. air trim.
C15	350 mmfd. mica
C16	.01 mfd. paper
C17	.1 mfd. paper
C18	.1 mfd. paper
C19	70 mmfd. mica (N)
C20	Tuning Condenser
C21	3200 mmfd. mica (pad.)
C22	420 mmfd. mica (pad.)
C23	11-29 mmfd. air trim.
C24	2-10 mmfd. air trim.
C25	70 mmfd. mica (N)
C26	.1 mfd. paper
C27	70 mmfd. mica (N)
C28	.05 mfd. paper
C29	.01 mfd. paper
C30	.005 mfd. paper
C31	.01 mfd. paper
C32	.1 mfd. paper
C33	.1 mfd. paper
C34	50 mmfd. mica (D)
C35	70 mmfd. mica (N)
C36	70 mmfd. mica (N)
C37	110 mmfd. mica (L)
C38	110 mmfd. mica (L)
C39	.01 mmfd. paper
C40	25 mfd. 25V. Electro.
C41	.5 mfd. paper
C42	.05 mfd. paper
C43	8 mfd. 450V. Electro.
C44	.01 mfd. paper
C45	25 mfd. 25V. Electro.
C46	8 mfd. 450V. Electro.
C47	.01 mfd. paper
C48	16 mfd. 450V. Electro.
C49	8 mfd. 450V. Electro.
C50	8 mfd. 450V. Electro.
C51	.1 mfd. paper
C52	.1 mfd. paper
C53	.1 mfd. paper
C54	350 mmfd. mica
C55	350 mmfd. mica
C56	3500 mmfd. mica
C57	.02 mfd. paper

SOCKET VOLTAGES (187).

Valve.		Cathode to Negative. Volts.	Screen Grid to Negative. Volts.	Plate to Negative. Volts.	Plate Current. M.A.	Heater Volts.
6K8G Detector	M.W.	5.0	100	210	1.0	6.3
	S.W.	3.0	100	210	1.5	—
Oscillator	M.W.	—	—	100	3.0	—
	S.W.	—	—	100	3.0	—
6U7G I.F. Amplifier .		4.0	100	210	5.5	6.3
6B6G 2nd Det., A.V.C. and 1st Audio ...		0	—	85*	0.5	6.3
25L6G Output		7.0	100	85	43.0	25.0
25Z6G Rectifier 230			—	235	—	25.0

Total Current 63 M.A. Voltage across L.S. field 120 volts.

Measured at 240 volts D.C. supply. No Signal. Controls maximum clockwise.

* Cannot be measured with ordinary voltmeter.

SOCKET VOLTAGES (271).

Valve.		Cathode to Negative. Volts.	Screen Grid to Negative. Volts.	Plate to Negative. Volts.	Plate Current. M.A.	Heater Volts.
6U7G R.F. Amp. ...		3.5	100	195	6.5	6.3
6K8G Detector	M.W.	6.0	95	195	0.8	6.3
	S.W.	2.5	95	195	1.0	—
Oscillator	M.W.	—	—	95	3.0	—
	S.W.	—	—	95	3.0	—
6U7G I.F. Amp.	M.W.	5.0	100	195	4.5	6.3
	S.W.	3.0	100	195	7.0	—
6B8G 2nd Det., A.V.C. and 1st Audio		1.3	35*	50*	0.5	6.3
25L6G Output		7.0	105	90	43.0	25.0
25Z6G Rectifier 230			—	235	—	25.0

Total current, 75 M.A. Voltage across speaker field, 115 volts.

Measured at 240 volts D.C. supply. No Signal. Controls maximum clockwise.

* Cannot be measured with ordinary voltmeter.

5 Vε

FISK RADIOLA 191, 191-Z, 192, 192-Z

5-Valve, One Band (191, 191-Z), and Two Band (192, 192-Z), Automatic and Manually Tuned, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave," 1600-550 K.C. "Short Wave" - 192, 16-50M. "Short Wave" - 192-Z, 13.65-46M.
MANUAL R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave," 600 K.C. (Osc.), 1500 K.C. (Osc. & Aer.) "Short Wave" - 192, 18 metres (Osc. & Aerial). "Short Wave" - 192-Z, 15 metres (Osc & Aerial). INTERMEDIATE FREQUENCY - 460 K.C.
POWER CONSUMPTION - 60 watts (191 & 192), 80 watts (191-Z and 192-Z).

VALVE COMPLEMENT - (191 & 192).
1. 6K8G Freq. Converter
2. 6U7G I.F. Amplifier
3. 6G8G I.F.Amp.2nd Det.A.V.C.& A.F.Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.
   6U5 Visual Tuning Indicator.

VALVE COMPLEMENT (191-Z & 192-Z).
1. 6A8G Freq. Converter
2. 6U7G I.F. Amplifier
3. 6B8G 2nd Det.,A.V.C. and A.F. Amp.
4. 6V6G Beam Power Output
5. 5V4G Rectifier
   6U5 Visual Tuning Indicator

UNDISTORTED POWER OUTPUT - 3 watts (191 & 192), 4.25 watts (191-Z & 192-Z).
Field Coil Resistance - 1550 ohms (191 & 192), 1700 ohms (191-Z & 192-Z).

SOCKET VOLTAGES (191).

Valve	Bias	Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector M.W.	—1.3‡	351	100	250	1.3	6.3
Oscillator	—	—	—	100	3.0	—
6U7G I.F. Amplifier .	—1.3‡	3.0†	100	250	7.7	6.3
6G8G Reflex Amp. ..	—	1.0†	19*	174*	44	6.3
6F6G Pentode	—17‡	—	250	240	33.5	6.3
5Y3G Rectifier	700/350 volts, 62.5 M.A. total current.					5.0

* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

SOCKET VOLTAGES (192).

Valve	Bias	Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector M.W.	—1.3‡	3.5†	100	250	1.3	6.3
S.W.	—1.3‡	2.0†	100	250	1.9	—
Oscillator	—	—	—	100	3.7	—
6U7G I.F. Amplifier						
MW.	—1.3‡	3.2†	100	250	7.0	6.3
S.W.	—1.3‡	2.0†	100	250	8.0	—
6G8G Reflex Amp. ..	—1.3‡	—	18*	165*	.56	6.3
6F6G Pentode	—17‡	—	250	230	33	6.3
5Y3G Rectifier	700/350 volts, 63 M.A. total current.					5.0

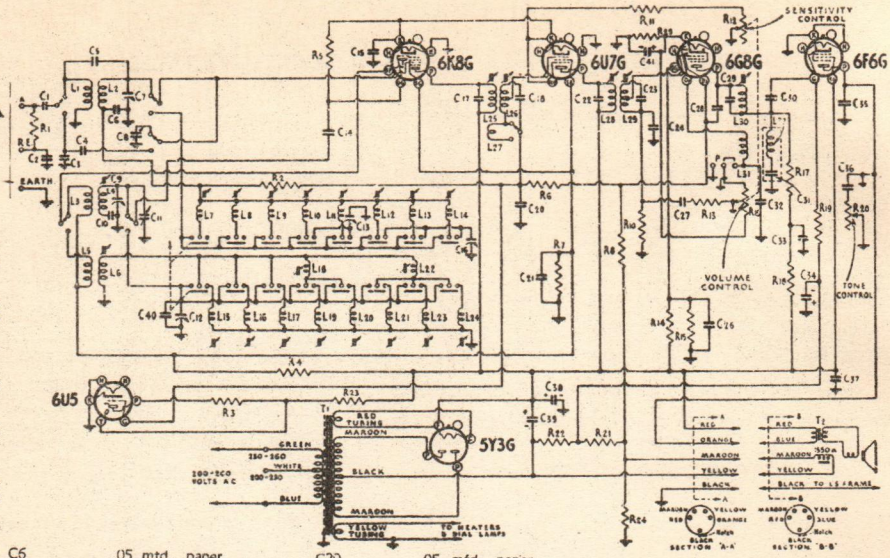
* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

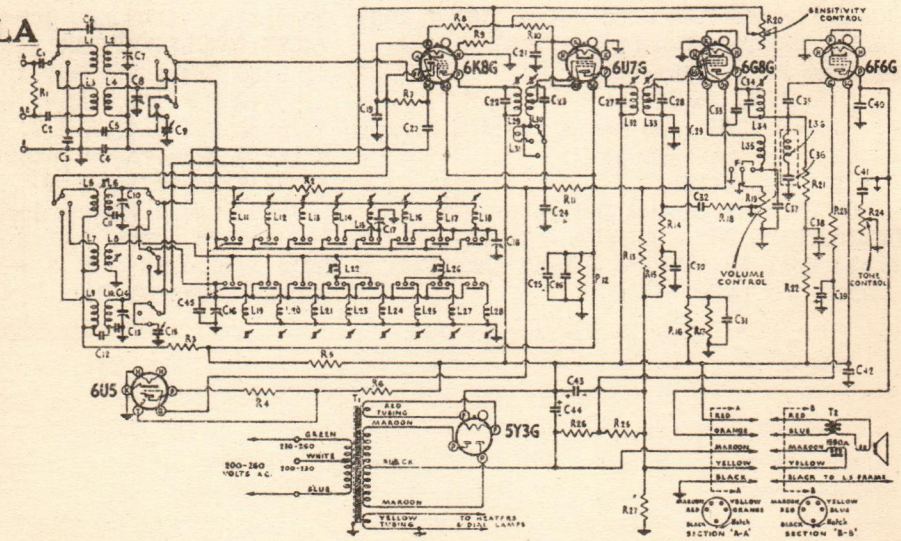
FISK RADIOLA 191 (Contd.)



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	11,000 ohms, 3 watt
R5	50,000 ohms, 1/3 watt
R6	1.75 megohms, 1/3 watt
R7	20,000 ohms, 1 watt
R8	2.3 megohms, 1/3 watt
R9	Deleted
R10	2.3 megohms, 1/3 watt
R11	200 ohms, 1/3 watt
R12	3,000 ohms Sens. Cont.
R13	500,000 ohms, 1/3 watt
R14	1 megohm, 1 watt
R15	100,000 ohms, 1 watt
R16	500,000 ohms Vol. Cont.
R17	150,000 ohms, 1 watt
R18	20,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	100,000 ohms Tone Cont
R21	20,000 ohms, 1 watt
R22	100,000 ohms, 1 watt
R23	20,000 ohms, 1 watt
R24	20 ohms, 3 watt
R25	2,000 ohms, 1/3 watt

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	260 mmfd., mica
C5	4 mmfd., mica
C6	.05 mfd., paper
C7	2-20 mmfd., air trim.
C8	Tuning Condenser
C9	11-29 mmfd., air trim.
C10	420 mmfd., mica (pad.)
C11	Tuning Condenser
C12	6-24 mmfd., air. trim.
C13	6-24 mmfd., air trim.
C14	70 mmfd., mica (N)
C15	.1 mfd., paper
C16	32-50 mmfd., air trim.
C17	115 mmfd., mica (A)
C18	130 mmfd., mica (H)
C19	Deleted
C20	.05 mfd., paper
C21	.1 mfd., paper
C22	115 mmfd., mica (A)
C23	130 mmfd., mica (H)
C24	110 mmfd., mica (L)
C25	Deleted
C26	.1 mfd., paper
C27	.01 mfd., paper
C28	50 mmfd., mica (D)
C29	70 mmfd., mica (N)
C30	.02 mfd., paper
C31	115 mmfd., mica (A)
C32	110 mfd., mica (L)
C33	.5 mfd., paper
C34	25 mfd., 25 V. electrolytic
C35	.0025 mfd., paper
C36	.035 mfd., paper
C37	.1 mfd., paper
C38	8 mfd., 450 V. electrolytic
C39	8 mfd., 500 V. electrolytic
C40	150 mmfd. Temp. Compersated
C41	25 mfd., 25 V. electrolytic

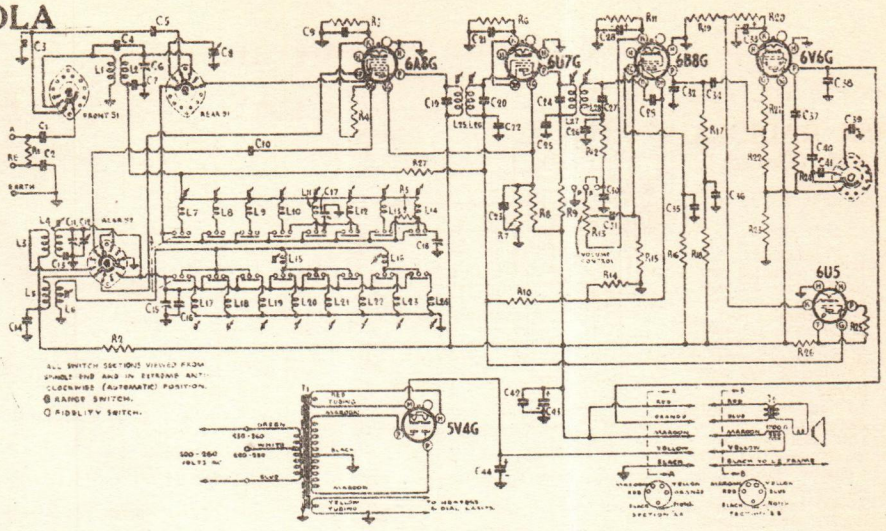
FISK RADIOLA 192



Code No.	RESISTORS.
R1	100,000 ohms. 1/3 W.
R2	100,000 ohms. 1/3 W.
R3	600 ohms, 1/3 W.
R4	1 megohm, 1 watt
R5	11,000 ohms, 3 W.
R6	20,000 ohms, 1 W.
R7	50,000 ohms, 1/3 W.
R8	200 ohms, 1/3 W.
R9	100 ohms, 1/3 W.
R10	200 ohms, 1/3 W.
R11	1.75 megohms, 1/3 W.
R12	20,000 ohms, 1 W.
R13	2.3 megohms, 1/3 W.
R14	2.3 megohms, 1/3 W.
R15	300,000 ohms, 1/3 W.
R16	1 megohm, 1 W.
R17	100,000 ohms, 1 W.
R18	500,000 ohms, 1/3 W.
R19	500,000 ohms Vol. Cont.
R20	3,000 ohms Sens. Cont.
R21	150,000 ohms, 1 W.
R22	20,000 ohms, 1 W.
R23	500,000 ohms, 1/3 W.
R24	100,000 ohms Tone Cont
R25	20,000 ohms, 1 W.
R26	100,000 ohms, 1 W.
R27	20 ohms, 3 W.

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	.05 mfd., paper
C5	270 mmfd., mica
C6	4 mmfd., mica
C7	2-20 mmfd., air trim.
C8	2-20 mmfd., air trim.
C9	Tuning Condenser
C10	11-29 mmfd., air trim.
C11	420 mmfd., mica (pad.)
C12	.05 mfd., paper
C13	3,500 mmfd., mica (padder)
C14	2-10 mmfd., air trim.
C15	Tuning Condenser
C16	2-20 mmfd., air trim.
C17	6-24 mmfd., air trim.
C18	32-50 mmfd., air trim
C19	.05 mfd., paper
C20	70 mmfd., mica (N)
C21	.05 mfd. paper
C22	115 mmfd., mica (A)
C23	130 mmfd., mica (N)
C24	.05 mfd., paper
C25	8 mfd., 450 V. Electrolytic
C26	.1 mfd., paper
C27	115 mmfd., mica (A)
C28	130 mmfd., mica (N)
C29	110 mmfd., mica (L)
C30	.1 mfd., paper
C31	.1 mfd., paper
C32	.01 mfd., paper
C33	50 mmfd., mica (D)
C34	70 mmfd., mica (N)
C35	.02 mfd., paper
C36	115 mmfd., mica (A)
C37	110 mmfd., mica (L)
C38	.5 mfd., paper
C39	25 mfd., 25 V. electrolytic
C40	.0025 mfd., paper
C41	.035 mfd., paper
C42	.1 mfd., paper
C43	16 mfd., 500 V. electrolytic
C44	16 mfd., 500 V. electrolytic
C45	150 mmfd. Temp. Compensated

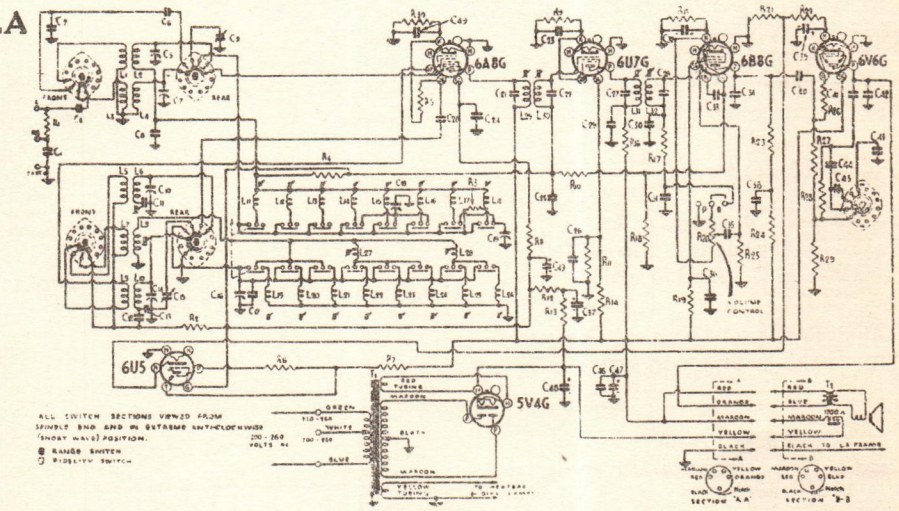
FISK RADIOLA 191Z



Code No.	RESISTORS
R1	100,000 ohms, 1/3 W.
R2	20,000 ohms, 1 W.
R3	350 ohms, 1/3 W.
R4	50,000 ohms, 1/3 W.
R5	500,000 ohms, 1/3 W.
R6	800 ohms, 1/3 W.
R7	11,000 ohms, 3 W.
R8	11,000 ohms, 3 W.
R9	3,000 ohms, 1 W.
R10	1.75 megohms, 1/3 W.
R11	2,000 ohms, 1/3 W.
R12	20,000 ohms, 1/3 W.
R13	500,000 ohms, Vol. Cont.
R14	2.3 megohms, 1/3 W.
R15	1.75 megohms, 1/3 W.
R16	3 megohms, .1 W.
R17	250,000 ohms, 1 W.
R18	20,000 ohms, 1 W.
R19	50 ohms, 3 W.
R20	200 ohms, 3 W.
R21	50,000 ohms, 1/3 W.
R22	390,000 ohms, 1/3 W.
R23	50,000 ohms, 1/3 W.
R24	250,000 ohms, 1/3 W.
R25	1 megohm, 1 W.
R26	20,000 ohms, 1 W.
R27	100,000 ohms, 1/3 W.

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	4 mmfd., mica
C5	260 mmfd., mica
C6	2-20 mmfd., air trim.
C7	.05 mfd., paper
C8	Tuning Condenser
C9	.05 mfd., paper
C10	70 mmfd., mica (N)
C11	11-29 mmfd., air trim.
C12	Tuning Condenser
C13	440 mmfd., mica (pad.)
C14	.1 mfd., paper
C15	2-20 mmfd., air trim.
C16	150 mmfd., temp. comp.
C17	2-20 mmfd., air trim.
C18	32-50 mmfd., air trim.
C19	70 mmfd., mica (N)
C20	70 mmfd., mica (N)
C21	.1 mfd., paper
C22	.05 mfd., paper
C23	.1 mfd., paper
C24	70 mmfd., mica (N)
C25	.05 mfd., paper
C26	110 mmfd., mica (L)
C27	70 mmfd., mica (N)
C28	25 mfd., 25 V. electro.
C29	50 mmfd., mica (D)
C30	110 mmfd., mica (L)
C31	.01 mfd., paper
C32	110 mmfd., mica (L)
C33	25 mfd., 25 V. electro
C34	.02 mfd., paper
C35	.1 mfd., paper
C36	.5 mfd., paper
C37	.05 mfd., paper
C38	.0025 mfd., paper
C39	2,000 mmfd., mica
C40	1,500 mmfd., mica
C41	700 mmfd., mica
C42	.1 mfd., paper
C43	16 mfd., 500 V. electro.
C44	16 mfd., 500 V. electro.

FISK RADIOLA 192Z



R1	100,000 ohms, 1/3 W
R2	10,000 ohms, 1 W.
R3	500,000 ohms 1/3 W.
R4	100,000 ohms, 1/3 W.
R5	50,000 ohms, 1/3 W.
R6	1 meg., 1 W.
R7	20,000 ohms, 1 W.
R8	50,000 ohms, 1 W.
R9	800 ohms, 1/3 W.
R10	1.75 megs., 1/3 W.
R11	10,000 ohms, 2 W.
R12	10,000 ohms, 1 W.
R13	10,000 ohms, 1 W.
R14	14,000 ohms., 3 W.
R15	2,000 ohms, 1/3 W.
R16	3,000 ohms, 1 W.
R17	20,000 ohms, 1/3 W.
R18	2.3 megs., 1/3 W.
R19	3 megs., 1 W.
R20	500,000 ohms, Vol. Cont.
R21	50 ohms, 3 W.
R22	200 ohms, 3 W.
R23	250,000 ohms 1 W.
R24	20,000 ohms, 1 W.
R25	1.75 megs., 1/3 W.
R26	50,000 ohms, 1/3 W.
R27	390,000 ohms, 1/3 W.
R28	250,000 ohms, 1/3 W.
R29	50,000 ohms, 1/3 W.
R30	400 ohms, 1/3 W.

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	Deleted
C5	2-20 mmfd., air trim.
C6	260 mmfd., mica
C7	2-20 mmfd., air trim.
C8	.05 mfd. paper
C9	Tuning Condenser
C10	11-29 mmfd., air trim.
C11	440 mfd., mica (pad.)
C12	.05 mfd., paper
C13	3,500 mmfd. mica (padder)
C14	2-10 mmfd., air trim.
C15	Tuning Condenser
C16	2-20 mmfd., air trim
C17	150 mmfd., Temp. Compensated
C18	2-20 mmfd., air trim.
C19	32-50 mmfd., air trim.
C20	70 mmfd., mica (N)
C21	70 mmfd., mica (N)
C22	70 mmfd., mica (N)
C23	1 mfd., paper
C24	.1 mfd., paper
C25	.05 mfd., paper
C26	.1 mfd., paper
C27	70 mmfd., mica (N)
C28	70 mmfd., mica (N)
C29	.05 mfd., paper
C30	110 mmfd., mica (L)
C31	110 mmfd., mica (L)
C32	25 mfd., 25 V. electrolytic
C33	50 mmfd., mica (D)
C34	110 mmfd., mica (L)
C35	.01 mfd., paper
C36	.1 mfd., paper
C37	8 mfd., 450 V. electrolytic
C38	.5 mfd., paper
C39	25 mfd., 25 V. electrolytic
C40	.02 mfd., paper
C41	.05 mfd., paper
C42	.0025 mfd., paper
C43	2,000 mmfd., mica
C44	1,500 mmfd., mica
C45	700 mmfd., mica
C46	.1 mfd., paper
C47	16 mfd., 500 V. electrolytic
C48	16 mfd., 500 V. electrolytic
C49	8 mfd., 450 V. electrolytic

FISK RADIOLA 191Z AND 192Z (Contd.)

SOCKET VOLTAGES (191-Z).

Valve	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	5.0	100	268	3.5	6.3
Oscillator	—	—	150	5.0	—
6U7G I.F. Amplifier					
M.W.	5.8	100	250	6.0	6.3
S.W.	5.8	100	243	8.0	—
6B8G 2nd Detector ..	1.0	35*	135*	0.45	6.3
6V6G Output	12.5	268	255	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. total current.				5.0

Voltage across loudspeaker field, 150 volts.

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input.

Volume Control at maximum.

SOCKET VOLTAGES (192-Z).

Valve	Cathode Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	4.0	100	265	3.0	6.3
Oscillator ...	—	—	170	4.5	—
6U7G I.F. Amplifier ..	5.25	100	250	5.5	6.3
6B8G Detector	1.0	35*	135*	0.5	6.3
6V6G Output	12.5	265	253	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. total current.				5.0

Voltage across loudspeaker field, 160 volts.

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input.

Volume Control at maximum.

FISK RADIOLA 270

6-Valve, Two Band, Battery Operated Superheterodyne

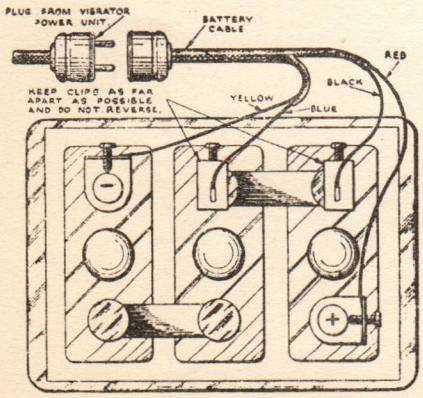
TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" - 16-50M.
R.F. ALIGNMENT SETTINGS - "Standard Medium Wave" - 600 K.C. (Osc.,) 1500 K.C. (Osc.,R.F. Aer.). "Short Wave" - 18M. (Osc., R.F. Aer.).
INTERMEDIATE FREQUENCY - 460 K.C.

CURRENT CONSUMPTION.	270B.	270V.
"A" Battery at 2 volts	0.60 Amp.	
"A" Battery at 6 volts		1.2 Amps.
"B" Battery at 135 volts	17-21 M.A.	(Supplied from Vibrator Power Unit)

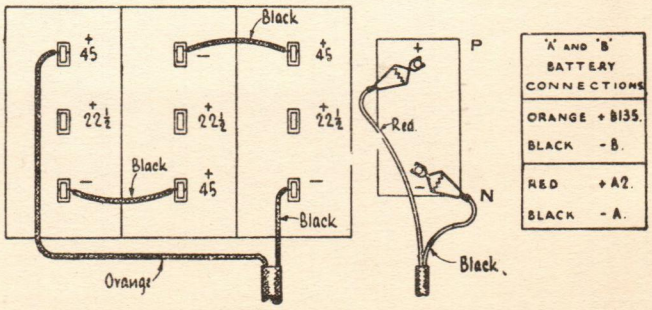
VALVE COMPLEMENT -

1. 1D5G R.F. Amplifier
2. 1C7G Frequency Converter
3. 1D5G I.F. Amplifier
4. 1F7G 2nd Det., A.V.C. and A.F. Amp.
5. 1E5G Audio Amplifier
6. 1J6G Class "B" Output

LOUDSPEAKER (Permanent Magnet)
UNDISTORTED POWER OUTPUT - 1.5 Watts

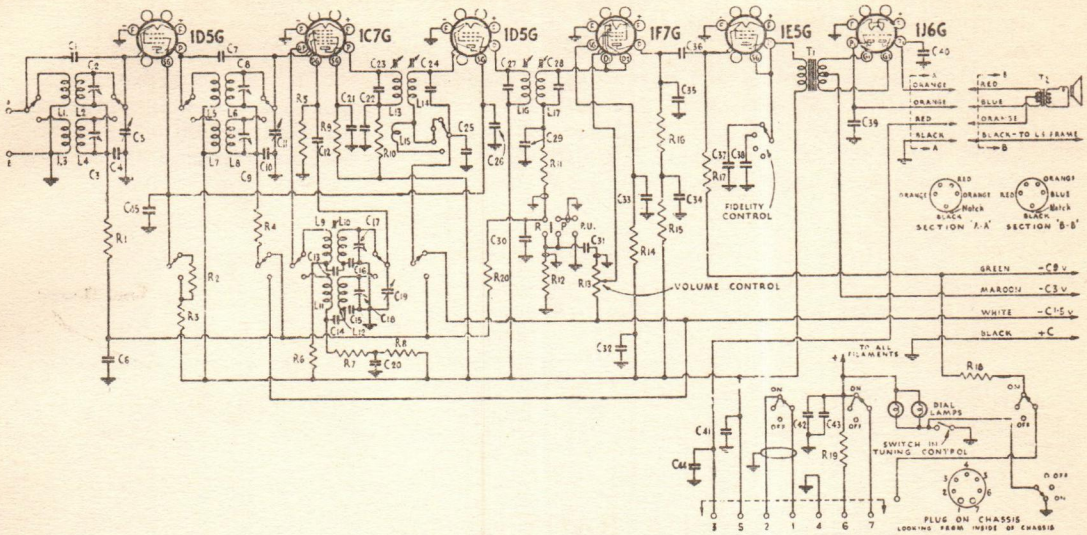


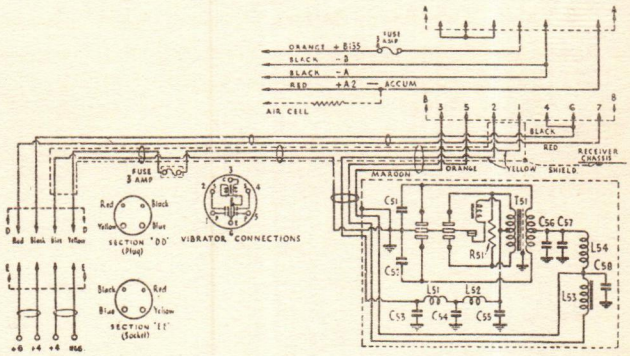
Accumulator Connections.



"A" and "B" Battery Connections.

FISK RADIOLA 270 (Contd.)





Code No. RESISTORS

R1	100,000 ohms, 1/3 watt
R2	60,000 ohms, 1 watt
R3	60,000 ohms, 1 watt
R4	100,000 ohms, 1/3 watt
R5	50,000 ohms, 1/3 watt
R6	50,000 ohms, 1 watt
R7	400 ohms, 1/3 watt
R8	6500 ohms, 1 watt
R9	40,000 ohms, 1 watt
R10	300 ohms, 1/3 watt
R11	60,000 ohms, 1/3 watt
R12	300,000 ohms, 1/3 watt
R13	1 megohm Vol. Control
R14	1 megohm, 1 watt
R15	50,000 ohms, 1 watt
R16	200,000 ohms, 1 watt
R17	500,000 ohms, 1/3 watt
R18	900 ohms, 1 watt
R19	4.5 ohms, wire wound
R20	1.75 megohms, 1/3 watt
R51	400 ohms, 1/3 watt

Code No. CONDENSERS

C1	4 mmfd. mica
C2	2-10 mmfd. Air Trim.
C3	2-20 mmfd. Air Trim.
C4	.05 mfd. paper
C5	Tuning Condenser
C6	.05 mfd. paper
C7	4 mmfd. mica
C8	2-10 mmfd. Air Trim.
C9	2-10 mmfd. Air Trim.
C10	.05 mfd. paper
C11	Tuning Condenser
C12	70 mmfd. mica (N)
C13	.05 mfd. paper
C14	.05 mfd. paper
C15	3200 mmfd. mica (pad.)
C16	420 mmfd. mica (pad.)
C17	11-29 mmfd. Air Trim.
C18	2-10 mmfd. Air Trim.
C19	Tuning Condenser
C20	8 mfd. 450V. electro.
C21	.1 mfd. paper
C22	.1 mfd. paper
C23	70 mmfd. mica (N)
C24	70 mmfd. mica (N)
C25	.02 mfd. paper
C26	.1 mfd. paper
C27	70 mmfd. mica (N)
C28	70 mmfd. mica (N)
C29	110 mmfd. mica (L)
C30	110 mmfd. mica (L)
C31	.02 mfd. paper
C32	.5 mfd. paper
C33	.1 mfd. paper
C34	.5 mfd. paper
C35	110 mmfd. mica (L)
C36	.05 mfd. paper
C37	.035 mfd. paper
C38	.01 mfd. paper
C39	.005 mfd. paper
C40	.005 mfd. paper
C41	8 mfd. 450V. electro
C42	.5 mfd. paper
C43	450 mmfd. mica
C44	450 mmfd. mica
C45	.1 mfd. paper
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd., 450V. electro.
C57	.02 mfd. paper
C58	.5 mfd. paper

SOCKET VOLTAGES.

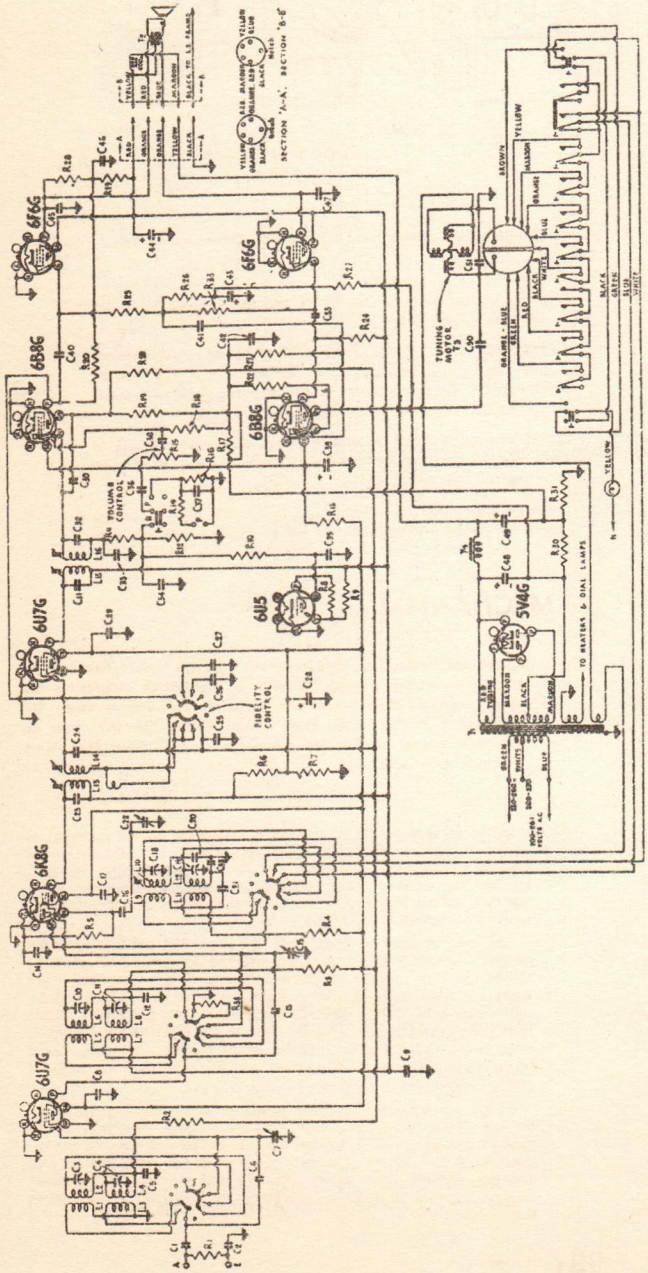
Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier					
M.W.	0	35	135	1.5	2.0
S.W.	0	40	135	2.0	—
1C7G Detector					
M.W.	0	50	134	1.5	2.0
S.W.	—1.5*	60	134	2.2	—
Oscillator M.W. ..	—	—	60	1.4	—
S.W. ..	—	—	110	3.8	—
1D5G I.F. Amplifier					
M.W.	—1.5*	35	135	0.8	2.0
S.W.	0	40	135	2.0	—
1F7G 2nd Detector ..	—1.5*	35*	65*	0.28	2.0
1E5G A.F. Amplifier ...	—9.0*	—	135	3.7	2.0
1J6G Output	—3.0*	—	135	4.0	2.0

* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

FISK RADIOLA 280

8 Valve, Two Band, Automatic Tuning, A.C. Operated Superheterodyne

TUNING RANGES: "Standard Medium Wave" (A) 1600-550 K.C. "Short Wave" (B) 16-50M. R.F. ALIGNMENT SETTINGS: "A" Band - 600 K C. (Osc.), 1500 K.C. (Osc.,R.F. Aer.). "B" Band- 18 metres (Osc.,R.F.,Aer.). INTERMEDIATE FREQ.:460 K.C. POWER CONSUMPTION:- (Tuning Motor Inoperative) - 105 watts. VALVE COMPLEMENT - 6U7G R.F. Amplifier. 6K8G - Freq. Convert. 6U7G I.F. Amp. 6B8G 2nd det.,A.V.C.,& A.F.Amp. 6B8G Phase Inverter and Muting. 6F6G Output. 6F6G Output. 5V4G Rectifier. 6U5 Visual Tuning Indicator. UNDISTORTED POWER OUTPUT - 8 watts. LOUDSPEAKER - 12 inch Electrodynamic (Dustproof) Field Coil Resistance - 600 ohms.



Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	100,000 ohms 1/3 watt
R4	600 ohms 1/3 watt
R5	50,000 ohms 1/3 watt
R6	7,000 ohms, 5 watts
R7	11 000 ohms, 3 watts
R8	1 megohm, 1 watt
R9	20,000 ohms, 1 watt
R10	1.75 megohms, 1/3 watt
R11	60,000 ohms, 1/3 watt
R12	300,000 ohms, 1/3 watt
R13	250,000 ohms, 1 watt
R14	20,000 ohms, 1/3 watt
R15	1 meg. Vol. Cont.
R16	50,000 ohms, 1/3 watt
R17	500,000 ohms, 1/3 watt
R18	1.75 megohms, 1/3 watt
R19	1.75 megohms, 1/3 watt
R20	250,000 ohms, 1 watt
R21	1.75 megohms, 1/3 watt
R22	100,000 ohms, 1/3 watt
R23	1 megohm, 1/3 watt
R24	250,000 ohms, 1 watt
R25	390,000 ohms, 1/3 watt
R26	100,000 ohms, 1/3 watt
R27	50,000 ohms, 1/3 watt
R28	100,000 ohms, 1 watt
R29	20,000 ohms, 1 watt
R30	100 ohms, 3 watts
R31	26 ohms, 3 watts
R32	200 ohms, 1/3 watt
R33	390,000 ohms, 1/3 watt

Code No.	CONDENSERS.
C1	500 mmfd. Mica
C2	500 mmfd. Mica
C3	2-20 mmfd. Air Trim.
C4	2-10 mmfd. Air Trim.
C5	.05 mfd. Paper
C6	4 mmfd. Mica
C7	Tuning Condenser
C8	.1 mfd. Paper
C9	.5 mfd. Paper
C10	2-20 mmfd. Air Trim.
C11	2-10 mmfd. Air Trim.
C12	.05 mfd. Paper
C13	4 mmfd. Mica
C14	.1 mfd. Paper
C15	Tuning Condenser
C16	70 mmfd. Mica (N.)
C17	.1 mfd. Paper
C18	11-29 mmfd. Air Trim
C19	2-10 mmfd. Air Trim.
C20	420 mmfd. Mica (Pad.
C21	.05 mfd. Paper
C22	Tuning Condenser
C23	80 mmfd. Mica (R.)
C24	80 mmfd. Mica (R.)
C25	.05 mfd. Paper
C26	.0015 mfd. Paper
C27	.0025 mfd. Paper
C28	8 mfd. 450 V. Elect.
C29	.1 mfd. Paper
C30	50 mmfd. Mica (D.)
C31	80 mmfd. Mica (R.)
C32	80 mmfd. Mica (R.)
C33	110 mmfd. Mica (L.)
C34	110 mmfd. Mica (L.)
C35	.05 mfd. Paper
C36	.05 mfd. Paper
C37	.0025 mfd. Paper
C38	.05 mfd. Paper
C39	8 mfd. 450 V. Elect.
C40	.01 mfd. Paper
C41	.5 mfd. Paper
C42	.5 mfd. Paper
C43	.25 mfd. 25 V. Elect.
C44	8 mfd. 500 V. Elect.
C45	.0025 mfd. Paper
C46	.005 mfd. Paper
C47	.0025 mfd. Paper
C48	16 mfd. 500 V. Elect.
C49	16 mfd. 500 V. Elect.
C50	.25 mfd. Paper
C51	60 mfd. Electrolytic
C52	3,200 mmfd. Mica (Padder)
C53	.01 mfd. Paper

ADJUSTMENTS FOR AUTOMATIC TUNING.

Any eight stations in the Medium Wave band may be selected for Automatic tuning. The stations are identified by means of the call-sign tabs supplied for insertion in the recesses on the keys. A sheet of tabs, on which are printed the call-signs of all Australasian stations accompanies the set. Call-signs of the eight stations selected should be neatly cut from the sheet.

The stations should be adjusted in order of their frequency in kilocycles. This order is used in the following example:—

(1) 2SM	1270 K.C.	(5) 2UE	950 K.C.
(2) 2CH	1190 K.C.	(6) 2GB	870 K.C.
(3) 2UW	1110 K.C.	(7) 2BL	740 K.C.
(4) 2KY	1020 K.C.	(8) 2FC	610 K.C.

Turn the receiver ON and allow it to operate for at least five minutes before making adjustments.

Proceed to set up for Automatic tuning as follows:—

(1) Press the key labelled "Manual", and set the Fidelity Control in any but the extreme clockwise position.

(2) Manually tune station No. 1. Be sure to tune accurately by watching the Tuning Indicator. Tune till the darkened sector of the Indicator's screen is at the narrowest possible width.

(3) Look in the back of the receiver and two semi-circular slots in which are eight adjusting pins, as shown, numbered 1 to 8 in Fig. 2, will be seen. These correspond to the keys on the keyboard, numbered 1 to 8, from left to right.

(4) Hold the "Manual" key down and press key No. 1 on the keyboard. Both keys will stay down. Then move adjusting pin No. 1 along the semi-circular slot, either clockwise or anti-clockwise, until the pilot globe situated above the adjusting pin goes out. It will be noticed that when the adjusting pin is moved to the right past this position the globe will light brightly and to the left dimly.

This is normal and care should be taken in making this adjustment to see that the globe does go completely out.

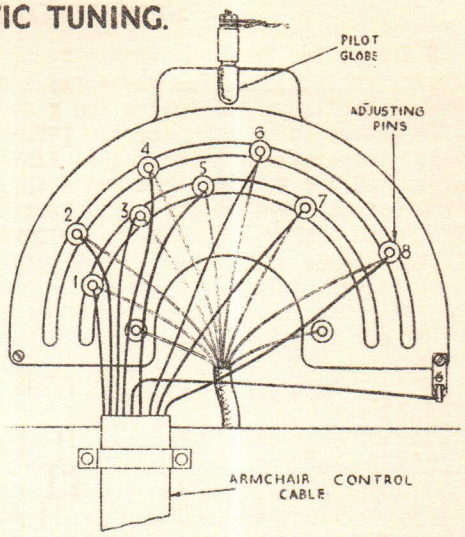


Fig. 2.—Automatic adjusting pins and Armchair Control connections.

(5) Press another key and key No. 1 and the "Manual" key will then be released.

(6) Press key No. 1 again. The pilot globe will stay out and the station will be heard. If reproduction is not normal, repeat the above procedure, as the adjustments were probably not carried out with great enough accuracy.

Proceed similarly for the other seven keys, and then any one of the eight stations may then be obtained by simply pressing the key on which is the call-sign of the desired station.

To change a station at any time, simply follow the same procedure and remember to replace the call-sign tab in the key with the new one.

AUTOMATIC TUNING MECHANISM.

ADJUSTMENT OF FLYWHEEL FRICTION.

In normal operation, the motor drives the tuning condenser and selector disc until the insulation line just passes the particular station-setting contact: The motor then reverses and moves the disc slowly in the opposite direction until the insulation line is under the contact, and the mechanism stops.

In some cases, particularly with high line-voltage, the disc may make two or three reversals before stopping.

The flywheel friction adjustment spring washer should be set to give the least number of reversals with the chassis in normal operating position.

ADJUSTMENT OF SELECTOR DISC.

The brass selector disc is fastened to the rear shaft of the tuning condenser by means of two set-screws. When the condenser is at maximum (plates fully meshed) the insulation line should be horizontal, with the operating-end at the right (viewed from rear). The operating-end has red insulating material and the brass is bevelled at this end.

The selector disc should be set so that the contact-tip plungers in the station-setting contacts project not more than 1/16-in. from the body of the contacts.

ARMCHAIR CONTROL UNIT.

WARNING:

Before installing the Armchair Control Unit, be sure that the locking mechanism has been removed from the unit. This can be tested by pressing a push button. If the button returns to its normal position when pressure is released, the unit is ready for installation. If the button stays down, remove the unit from its case, then remove the locking mechanism by drilling-out four rivets by which it is held.

When an Armchair Control Unit is connected to the receiver, as shown in Fig. 2, it duplicates the action of the eight station selector keys on the receiver's keyboard. That is, after pressing the "Manual" key on the receiver, eight broadcast stations may be tuned automatically at any distance up to the length of the connecting cable from the instrument (25 feet).

The unit is supplied fitted with a 9 wire flat cable. Take the central wire and solder it to a lug attached to the lower right-hand corner of the selector mechanism frame. The remaining eight wires are then soldered to the eight adjusting pins. The first, or right-hand wire, looking towards the unit, to No. 1 pin, the second to No. 2 pin and so on. The call-signs of the eight selected stations, which must correspond to those for which the receiver is set; should be removed from the sheet supplied and fitted beneath the windows of the unit.

Before operating the receiver from the unit, the "Manual" key on the receiver's keyboard must first be pressed. Then, press the push-button on the Unit for the desired station and hold the button down until the station is tuned. Care must be taken not to hold two push-buttons down at one time, as both windings of the motor may be engaged simultaneously, causing the motor to be inoperative and overheated.

FISK RADIOLA 280 (Contd.)

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amplifier	—3.4*	100	250	8.0	6.3
6K8G Detector, M.W.	—5.0*	100	250	1.5	6.3
S.W.	—3.4*	100	250	2.0	—
Oscillator, M.W.	—	—	100	2.8	—
S.W.	—	—	100	2.8	—*
6U7G I.F. Amplifier	—3.4*	100	250	8.0	6.3
6B8G Det. and 1st Audio	—3.4*	35*	125*	0.5	6.3
6B8G Phase Inverter	—3.4*	35*	125*	0.5	6.3

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6F6G Pentode	—16.5*	250	240	35	6.3
6F6G Pentode	—16.5*	250	240	35	6.3
5V4G Rectifier	680/340 V.	130	M.A. total drain		5.0

* Cannot be measured with ordinary voltmeter.

Measured with controls at maximum clockwise. Supply voltage 240 volts A.C. No signal.

Tuning Motor Voltage (no load), 27 Volts A.C.

Tuning Motor Voltage (on load), 24 Volts A.C

FISK RADIOLA 281

13 Valve, Three Band, Automatic Tuning, A.C. Operated Superheterodyne

TUNING RANGES:- "Standard Medium Wave" (A) 1600-550 K.C. "Short Wave" (B) 35-105M. "Short Wave" (C) 13-39M. R.F. ALIGNMENT SETTINGS:- "A" Band - 600 K.C. (Osc.), 1500K.C. (Osc.,R.F., Aer.). "B" Band - 38 metres (Osc.,R.F.,Aer.). "C" Band - 14 metres (Osc., R.F., Aer.). INTERMEDIATE FREQUENCY - 460 K.C. POWER CONSUMPTION (Tuning Motor Inoperative) - 135 watts.

VALVE COMPLEMENT - 1. 6U7G R.F. Amp. 2. 6K8G Mixer. 3. 6J7G Oscillator. 4. 6J7G Osc. Control. 5. 6U7G 1st I.F. Amp. 6. 6U7G 2nd I.F. Amp. 7. 6H6G 2nd det.,A.V.C., & A.F.C. 8. 6R7G 1st Audio Amp. 9. 6J7G 2nd Audio Amp. 10. 6J7G Phase Inverter. 11. 6V6G Output. 12. 6V6G Output. 13. 5V4G Rectifier. 6U5 Visual Tuning Indicator.

UNDISTORTED POWER OUTPUT - 13 watts. LOUDSPEAKER - 12 inch electro-dynamic (dustproof) Field Coil Resistance - 600 ohms.

CIRCUIT ARRANGEMENT.

The I.F. amplifier channel is of the variable selectivity type, in which variation of selectivity is obtained by switching in overcoupling windings (L19 and L22). These windings are in close proximity to their respective primary windings and are arranged to be switched in series with their respective secondary windings to give the desired increases in coupling and to produce the required changes in selectivity.

Each overcoupling winding is centre tapped so that two degrees of overcoupling are available on each of the two I.F. transformers, and combinations of these are used to obtain the desired effect. The switching of these windings is performed primarily by the fidelity switch, but the action of this switch, in regard to selectivity, is modified by the switch operating on the main tuning control knob.

The function of the switch on the main tuning control knob is to remove the overcoupling from the first I.F. transformer when pushed in, so that tuning can be satisfactorily performed, even though the fidelity switch be in a position which would normally give wide band width and consequent difficulty in tuning.

The function of the automatic frequency control circuit is to automatically change the frequency of the heterodyne oscillator, so that the correct intermediate frequency is formed for the I.F. amplifier. The circuit consists essentially of an I.F. discriminator, which furnishes a control voltage of the correct polarity to an oscillator frequency control valve for generated intermediate frequency carriers slightly above and below 460 K/cs, the frequency to which the I.F. amplifier is tuned.

The action of the discriminator circuit depends on the fact, that a 90 degree phase difference exists between the primary and secondary potentials of a double tuned, loosely coupled transformer, when the resonant frequency is applied; and that this phase difference varies as the applied frequency varies. That is, the maximum resultant response voltage across the primary and secondary windings, connected in series, will occur at a frequency, to one side of that to which the individual windings are resonated. Whether the frequency at which this maximum response occurs, is at a higher or lower frequency than that to which the individual circuits are tuned, depends on whether the windings are connected in series aiding or opposing.

The discriminator, or fourth I.F. transformer, consists of a primary winding L25, which is part of the third I.F. transformer secondary tuned circuit (tuned to 460 K/cs), and the centre tapped secondary L26, L27 may be considered as two secondary coils, the upper L26 series opposing, and the lower L27 series aiding the primary L25.

The core in L26, L27 is inserted to inductively balance the two halves.

The function of the coil L28, in parallel with L26. L27 is to tune L26, L27, L28 and C50 to 460 K/cs. It is arranged that the maximum rectified voltage will appear across R25, when the intermediate signal frequency is above 460 K/cs. and across R26 and R28 in series, when below 460 K/cs. The resistors R25, R26 and R28 are connected in series, between ground and a point leading to the oscillator control valve grid.

D.C. voltages across R25 are always in opposition to those across R26 and R28. Consequently, the oscillator control valve grid bias voltage is always a differential amount, depending upon the I.F. signal strength, and its frequency deviation from the nominal value of 460 K/cs. The polarity of this differential bias, with respect to ground, depends upon whether the intermediate frequency signal is above or below 460 Kc/s, but is always in the direction which will bring the generated intermediate frequency nearer to 460 K/cs.

The visual tuning indicator 6U5 has its cathode connected to ground, through resistor R46, across which the minimum bias for the R.F. amplifier, first detector and I.F. amplifier valves is developed. The grid of the 6U5 is connected through R22 to the A.V.C. line, which is fed with A.V.C. voltage through R27, from the rectified voltage appearing across R26. When there is no signal present, the junction voltages of R25, R26 and R28, tend towards ground potential, the grid of the 6U5 draws current and holds the potential of the A.V.C. line at a value of —3.5 volts, which is the sum of the voltage drop across R46, and the grid to cathode contact voltage of the 6U5.

The fidelity switch, besides varying the selectivity of the I.F. channel, and controlling the operation of the A.F.C., also operates on the automatic station selection circuit and the audio frequency amplifying circuit.

In the motor circuit, the fidelity switch is arranged to open-circuit the 24-volt supply in the first two positions, as these two positions are intended for distant reception, and automatic station selection is, therefore, not required. This, however, does not affect the operation of the scanning buttons, which will still operate if the manual tuning button is pressed, or if the wave change switch is turned to either of the short wave bands.

In the audio frequency circuit, the fidelity switch operates in positions 1 and 3 to connect the condenser C64 to ground from the plate of the 6R7G, thus reducing the high frequency response in these positions.

A special two-section filter is used in the plate circuit of the 6R7G first audio amplifier, and this filter, consisting of L29, C60, C61, L30, C62 and C63, is of the low pass type with cut-off frequency commencing at a frequency of 7 Kc/s and having maximum suppression at 10 Kc/s. This operates to materially reduce 10 Kc/s heterodyne whistles and all frequencies above 10 Kc/s, which are generally associated with background noise.

Inverse feedback is used with this audio amplifier circuit, and it is essential that correct phase relationship be maintained, so that in the event of the output transformer being removed, it is essential that it be replaced with identical connections.

CAUTION.

The iron core screw L26, L27, on the bottom of the fourth I.F. transformer, has been accurately adjusted for an exact electrical balance of coil L26, L27, to the centre tap during manufacture and should not be disturbed. However, if for any reason the adjustment has been moved from its original position, it will be necessary to mechanically adjust this screw, until the end of the stud protrudes exactly $\frac{1}{16}$in. (two threads exposed) above the brass bushing, prior to any alignment operations.

FISK RADIOLA 281 (Contd.)

A.F.C. DISCRIMINATOR ADJUSTMENTS.

These adjustments are rather critical, and should be performed with extreme care. Improper adjustment may result in the oscillator control tube failing to function, or else may cause it to detune the oscillator circuit, instead of tuning it to the signal.

It is assumed that the iron core adjusting screw L28 (top of fourth I.F. transformer) has been turned all the way out (extreme anti-clockwise), prior to the preceding tabulated adjustments.

The adjustments are as follows:—

1. Set Fidelity Control in maximum anti-clockwise position.
2. Connect the test oscillator to the grid cap of the 6K8G first detector, and adjust the R.F. input (unmodulated) at 460 K.C. to obtain half to two-thirds closure of the tuning indicator. Carefully adjust the tuning of the test oscillator for maximum response of the tuning indicator. The most accurate adjustment will be obtained by adjusting the tuning control midway between the two points, where the eye just appears to start to open. The tuning adjustment of the test oscillator must remain perfectly undisturbed throughout the remainder of the procedure.
3. Replace the grid connector of the 6K8G first detector, and place the "high" test oscillator lead near the grid lead of the I.F. amplifier, but not wrapped around it, or the tuning of that circuit will be upset. Advance the R.F. output of the test oscillator to about 100 millivolts, which should cause no more than a barely perceptible response in the tuning indicator, if the coupling to the grid lead of the 6U7G is not too close.
4. Take another receiver of the Superheterodyne type, and set its dial pointer to 550 Kc/s., when its local oscillator should radiate at 1000 Kc/s., if the intermediate frequency is 460 Kc/s. Connect a wire to the aerial terminal of the Receiver, and place the other end of it near enough to the oscillator circuits of the other receiver to obtain half to two-thirds closure of the tuning indicator, as in 2 above, when the 1000 K.C. signal is tuned in. Simultaneously, a heterodyne beat-note will be heard, which is reduced to zero-beat at exact tune and maximum deflection of the Magic Eye.
5. Turn the Fidelity control to Position 3, and commence turning the iron core adjusting screw L28 clockwise, until the high beat note, which is heard, is reduced to zero-beat. Reset the fidelity control to maximum anti-clockwise position. Re-adjust the zero-beat as the control is thrown back and forth from "maximum anti-clockwise" to "third position." Adjustment of the discriminator circuit is then complete.

NOTE:—With the Fidelity control at position 3, operation of the tuning control of the Receiver will cause the above-mentioned beat note to slowly rise in frequency to about 2000 or 3000 cycles per second, and then suddenly disappear, after the dial pointer has moved through an interval of 15-20 K.C. in either direction from exact tune. The two points at which the A.F.C. circuits lose control should be roughly equidistant from the point of exact resonance; the intervals, at which control is regained, are about two-thirds of those at which control is lost. The interval, over which control is effective, is directly proportional to the amount of A.V.C. generated by the received signal. If the ratio of the two intervals on either side of resonance at which control is lost is greater than 1.5:1, the oscillator control 6J7G bias requires adjustment to centre the control action. The necessary procedure is described later.

NOTE:—In adjustment 4, a second test oscillator set to 1000 Kc/s. and unmodulated may be used, if available, in place of the second receiver. Failing either, the signal from a local station (preferably 550-1000 K.C.) may be used, but the presence of programme modulation causes a little difficulty in accurate determination of the zero-beat points.

OSCILLATOR CONTROL CIRCUIT ADJUSTMENTS.

This circuit should only seldom require attention, having been carefully adjusted in manufacture.

A 4.5 volt bias battery is required.

1. Set the Fidelity control at position 3, and volume control full on; other controls as before.
2. Connect a test oscillator at 1000 K.C. (30% modulated) to the grid cap of the 6K8G first detector, and adjust input to a low level, so that just comfortable response is obtained when the signal is tuned-in. Note carefully the dial reading of the Receiver.
3. Connect two leads to resistor R2 (500,000 ohms on panel No. 6684) and join them to the 4.5 v. bias battery. Retune the receiver to the signal and note the dial reading. Reverse the battery and take a third reading.

   The first reading should be midway between the two last, which should have a total separation of 20 to 30 Kc/s. If the ratio of the frequency differences between the first reading and each of the other two, is greater than 1.5 to 1, say, for example, 20 K.C. on one side and 12 Kc/s. the other, further adjustment is necessary.
4. If the first reading is on the high frequency side of the mid-point, between the two taken with the battery in circuit, shunt R6 (450 ohms cathode bias resistor of 6J7 oscillator control tube) with 5000 ohms or 2000 ohms as may be required. If the first reading is on the low frequency side, replace R6 with a larger value, such as 500 ohms.

• • • •

NOTE: For Adjustments for Automatic Tuning - Adjustment of Flywheel Friction - Adjustment of Selector Disc - and Armchair Control Unit - see Model 280.

SOCKET VOLTAGES.

Valve	Cathode to Chass. Volts	Control Grid to Chass. Volts	Screen Grid to Chass. Volts	Plate to Chass. Volts	Plate Current M A.	Heater Volts
6U7G R.F. Amplifier	0	—3.5*	98	250	7.2	6.3
6K8G Mixer, Band A	4.5	—3.5*	100	250	1.0	6.3
,, B	2.5	—3.5*	100	250	1.0	6.3
,, C	2.5	0	100	250	1.5	6.3
6J7G Oscil., Band A	0	0	135	145	3.5	6.3
,, B	0	0	140	170	3.0	6.3
,, C	0	0	145	160	3.2	6.3
6J7G Oscil. Control Band A	4.4	0	100	235	1.1	6.3
,, B	4.2	0	100	240	0.8	6.3
,, C	4.2	0	100	240	0.8	6.3
6U7G 1st I.F. Amplifier	0	—3.5*	98	170	7.2	6.3
6U7G 2nd I.F. Amplifier	0	—3.5*	100	250	7.2	6.3
6H6G 2nd Detector, A.V.C. and A.F.C.	0	—	—	0	—	6.3

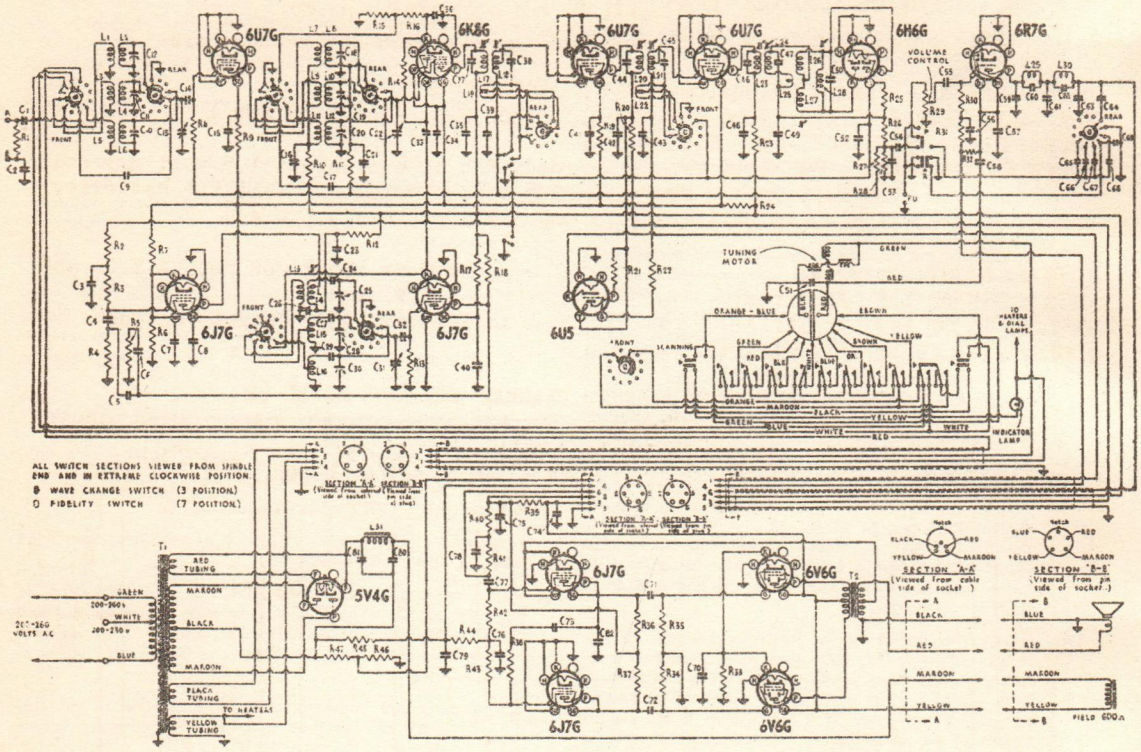
Valve	Cathode to Chass. Volts	Control Grid to Chass. Volts	Screen Grid to Chass. Volts	Plate to Chass. Volts	Plate Current M A.	Heater Volts
6P7G 1st Audio Amp.	0	—5.5*	—	100*	1.5	6.3
6J7G 2nd Audio Amp.	0	—5.5*	†	125*	1.25	6.3
6J7G Phase Inverter	0	—5.5*	†	125*	1.25	6.3
6V6G Output	20.0	0	300	290	36.0	6.3
6V6G Output	20.0	0	300	290	36.0	6.3
5V4G Rectifier	770/385 volts A.C. 130 M.A. total current					5.0

Tuning Motor Voltage (no load), 27.0 volts A.C.
Tuning Motor Voltage (on load), 24.0 volts A.C.
Voltage across loudspeaker field, 100 volts D.C.

Measured at 240 volts A.C. supply. No signal input. Controls in maximum clockwise position excepting range switch, which is set as desired.

* Cannot be measured with ordinary voltmeter.
† Connected to Plate.

FISK RADIOLA 281 (Contd.)



R1	100,000 ohms, 1/3 watt	C3	0.05 mfd., Paper	C45	250 mmfd., Mica
R2	500,000 ohms, 1/3 watt	C4	200 mmfd., Mica (J)	C46	100 mmfd., Mica
R3	1.75 megohms, 1/3 watt	C5	200 mmfd., Mica (J)	C47	100 mmfd., Mica
R4	100,000 ohms, 1/3 watt	C6	350 mmfd., Mica	C48	0.05 mfd., Paper
R5	100 ohms, 1/3 watt	C7	0.1 mfd., Paper	C49	110 mmfd., Mica (L)
R6	450 ohms, 3 watt	C8	8 mfd., 450V., Electro-lytic	C50	100 mmfd., Mica
R7	11,000 ohms, 3 watt	C9	4 mmfd., Mica	C51	60 mfd., Non-Polarised Elect.
R8	500,000 ohms, 1/3 watt	C10	11-29 mmfd., Air Trim.	C52	0.5 mfd., Paper
R9	900 ohms, 1/3 watt	C11	2-20 mmfd., Air Trim.	C53	110 mmfd., Mica (L)
R10	600 ohms, 1/3 watt	C12	2-20 mmfd., Air Trim.	C54	0.025 mfd., Paper
R11	100,000 ohms, 1/3 watt	C13	Tuning Condenser	C55	0.025 mfd., Paper
R12	10,000 ohms, 1 watt	C14	350 mmfd., Mica	C56	0.25 mfd., Paper
R13	50,000 ohms, 1/3 watt	C15	0.1 mfd., Paper	C57	0.01 mfd., Paper
R14	50,000 ohms, 1/3 watt	C16	0.1 mfd., Paper	C58	0.25 mfd., Paper
R15	300 ohms, 1/3 watt	C17	4 mmfd., Mica	C59	1500 mmfd., Mica
R16	300 ohms, 1/3 watt	C18	2-20 mmfd., Air Trim.	C60	680 mmfd., Mica
R17	70,000 ohms, 1 watt	C19	2-20 mmfd., Air Trim.	C61	1500 mmfd., Mica
R18	30,000 ohms, 1 watt	C20	11-29 mmfd., Air Trim.	C62	990 mmfd., Mica
R19	900 ohms, 1/3 watt	C21	0.05 mfd., Paper	C63	680 mmfd., Mica
R20	15,000 ohms, 2 watts	C22	Tuning Condenser	C64	0.025 mfd., Paper
R21	1.0 megohm, 1 watt	C23	8 mfd., 450V., Electro-lytic	C65	0.003 mfd., Paper
R22	250,000 ohms, 1/3 watt	C24	450 mmfd. (Padder temp. comp.)	C66	0.006 mfd., Paper
R23	600 ohms, 1/3 watt	C25	2-20 mmfd., Air Trim.	C67	0.01 mfd., Paper
R24	7,000 ohms, 5 watts	C26	0.5 mfd., Paper	C68	0.05 mfd., Paper
R25	500,000 ohms, 1/3 watt	C27	2,250 mmfd., Mica (Padder)	C69	0.02 mfd., Paper
R26	200,000 ohms, 1/3 watt	C28	2-20 mmfd., Air Trim.	C70	25 mfd., 25v., Electro-lytic
R27	1.75 megohms, 1/3 watt	C29	5,400 mmfd., Mica (Padder)	C71	0.1 mfd., Paper
R28	300,000 ohms, 1/3 watt	C30	9-29 mmfd., Air Trim.	C72	0.025 mfd., Paper
R29	1.0 megohm, Vol. Cntrl.	C31	Tuning Condenser	C73	0.01 mfd., Paper Con-denser
R30	1.75 megohms, 1/3 watt	C32	110 mmfd., Mica (L)	C74	16 mfd., 550V., Electro-lytic
R31	250,000 ohms, 1/3 watt	C33	110 mmfd., Mica (L)	C75	8 mfd., 500V., Electro-lytic
R32	100,000 ohms, 1/3 watt	C34	0.25 mfd., Paper	C76	0.25 mfd., Paper
R33	240 ohms, 3 watt	C35	0.05 mfd., Paper	C77	0.0025 mfd., Paper
R34	250,000 ohms, 1/3 watt	C36	0.1 mfd., Paper	C78	0.25 mfd., Paper
R35	250,000 ohms, 1/3 watt	C37	250 mmfd., Mica	C79	0.25 mfd., Paper
R36	100,000 ohms, 1 watt	C38	250 mmfd., Mica	C80	16 mfd., 550V., Electro-lytic
R37	100,000 ohms, 1 watt	C39	0.05 mfd., Paper	C81	16 mfd., 550V., Electro-lytic
R38	500,000 ohms, 1/3 watt	C40	0.05 mfd., Paper	C82	0.005 mfd., Paper
R39	1,000 ohms, 3 watt	C41	0.1 mfd., Paper		
R40	50,000 ohms, 1 watt	C42	0.1 mfd., Paper		
R41	50,000 ohms, 1 watt	C43	0.05 mfd., Paper		
R42	1 megohm, 1/3 watt	C44	250 mmfd., Mica		
R43	35,000 ohms, 1/3 watt				
R44	250,000 ohms, 1/3 watt				
R45	500,000 ohms, 1/3 watt				
R46	20 ohms, 3 watt				
R47	20 ohms, 3 watt				

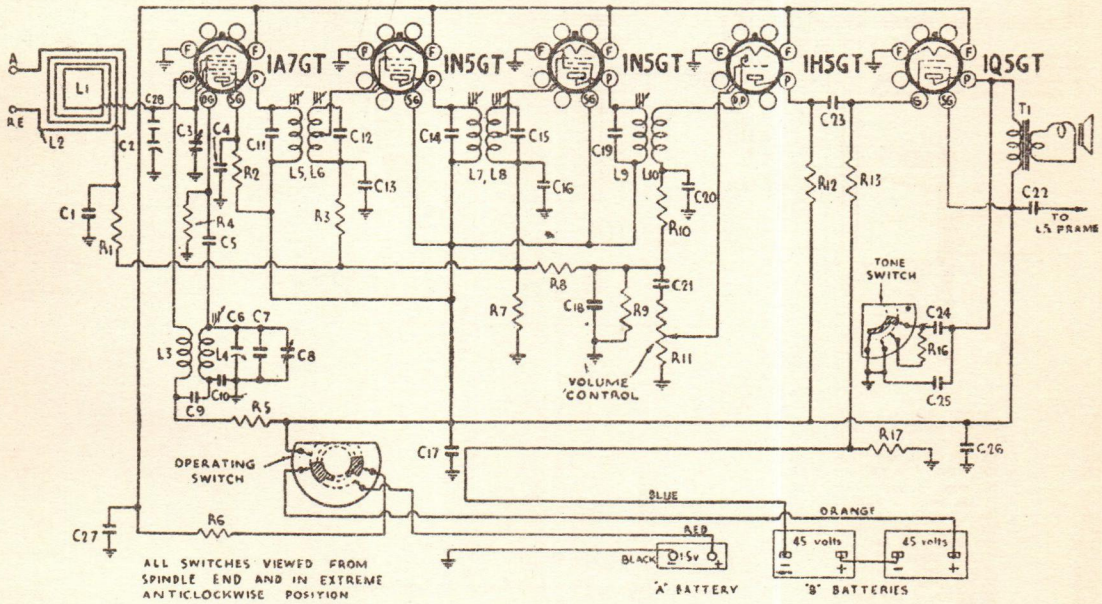
Code No.	CONDENSERS
C1	500 mmfd., Mica
C2	500 mmfd., Mica

FISK RADIOLA 62 – Portable Five

5-Valve, One Band, Dry Cell Battery Operated Portable Superheterodyne

TUNING RANGE: - "Standard Medium Wave" - 1600-550 K.C.
R.F. ALIGNMENT SETTINGS:- 600 K.C. (Osc.), 1500 K.C. (Osc. and Aer.).
INTERMEDIATE FREQUENCY - 460 K.C.
BATTERY COMPLEMENT - "A" Battery - 1 Eveready PR8 or equivalent 1.5 volt dry cell.
"B" Battery - 2 Eveready PR45 or equivalent 45 volt "B" batteries.
CURRENT CONSUMPTION - "A" Battery - 0.3 amp. "B" Battery 9.5 M.A.
VALVE COMPLEMENT -
1A7G or 1A7GT Converter
1N5G or 1N5GT I.F. Amplifier
1N5G or 1N5GT I.F. Amplifier
LOUDSPEAKER (PERMANENT MAGNET).
1H5G or 1H5GT 2nd det., A.V.C. and A.F. Amp.
1Q5G or 1Q5GT Output Pentode

EARLY PRODUCTION CIRCUIT DIAGRAM AND CODE MODEL 62



ALL SWITCHES VIEWED FROM SPINDLE END AND IN EXTREME ANTICLOCKWISE POSITION

R1	500,000 ohms 1/3 W.
R2	70,000 ohms 1 W.
R3	500,000 ohms 1/3 W.
R4	200,000 ohms 1/3 W.
R5	40,000 ohms 1 W.
R6	.2 ohm wire wound
R7	1 megohm 1/3 W.
R8	1.75 megohms 1/3 W.
R9	500,000 ohms 1/3 W.
R10	20,000 ohms 1/3 W.
R11	1 meg. Volume Control
R12	1 meg. 1 W.
R13	1.75 meg. 1/3 W.
R14	Deleted
R15	Deleted
R16	20,000 ohms 1/3 W.
R17	650 ohms 3 W.

Code No.	CONDENSERS
C1	.05 mfd. paper
C2	8-50 mmfd. mica trim.
C3	Tuning condenser
C4	.01 mfd. paper
C5	50 mmfd. mica (D)
C6	8-50 mmfd. mica trim.
C7	9 mmfd. mica (B)
C8	Tuning condenser
C9	.05 mfd. paper
C10	420 mmfd. mica (pad.)
C11	115 mmfd. mica (A)
C12	130 mmfd. mica (H)
C13	.05 mfd. paper
C14	115 mmfd. mica (A)
C15	130 mmfd. mica (H)
C16	.05 mfd. paper
C17	.25 mfd. paper
C18	200 mmfd. mica (J)
C19	70 mmfd. mica (N)
C20	200 mmfd. mica (J)
C21	.01 mfd. paper
C22	.05 mfd. paper
C23	.01 mfd. paper
C24	.035 mfd. paper
C25	.0025 mfd. paper
C26	8 mfd. 525V. electro.
C27	.5 mfd. paper
C28	15 mmfd. mica (C)

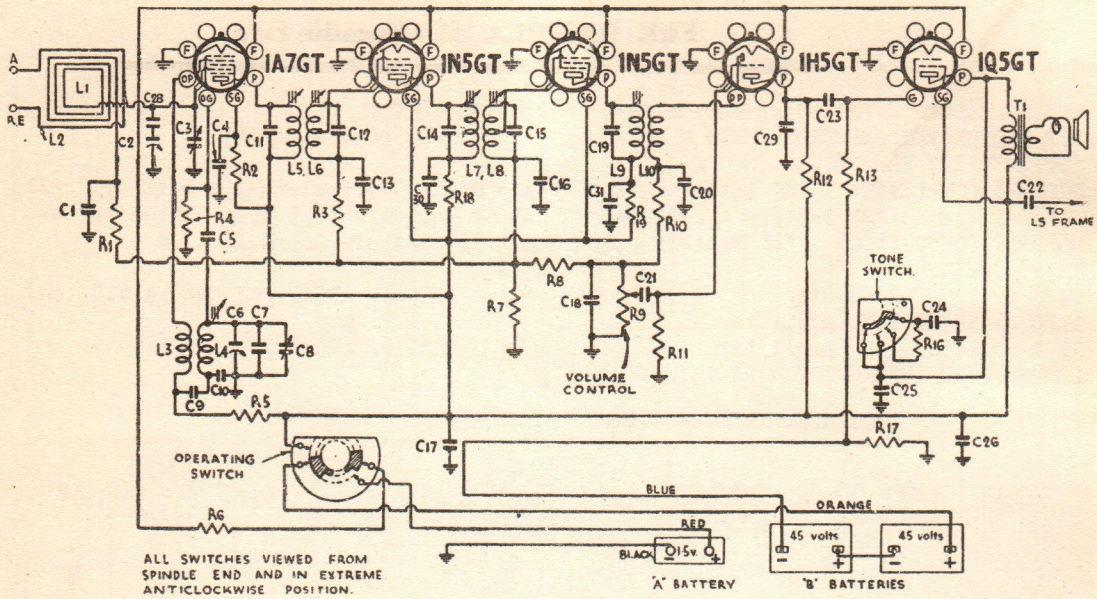
SOCKET VOLTAGES,

VALVE	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1A7G Detector	0	35	84	0.26	1.4
Oscillator	—	—	55	0.75	—
1N5G 1st I.F. Amp. ..	0	84	84	1.0	1.4
1N5G 2nd I.F. Amp. .	0	84	84	1.0	1.4
1H5G 2nd Detector ..	0	—	60*	.025	1.4
1Q5GT Output	—6*	84	80	4.5	1.4

Total "B" battery current 9.5 M.A.

* Cannot be measured accurately with ordinary voltmeter.

Measured with no signal input. Volume control at maximum clockwise.



FISK RADIOLA 62 (Contd.)

Code No.	RESISTORS
R1	500,000 ohms 1/3 W.
R2	70,000 ohms 1 W.
R3	500,000 ohms 1/3 W
R4	200,000 ohms 1/3 W.
R5	40,000 ohms 1 W.
R6	.2 ohm wire wound
R7	1 megohm 1/3 W.
R8	1.75 megohms 1/3 W.
R9	1 megohm Vol. Control
R10	20,000 ohms 1/3 W.
R11	10 meg. 1 W.
R12	1 meg. 1 W.
R13	1.75 meg. 1/3 W.
R14	Deleted
R15	Deleted
R16	20,000 ohms 1/3 W.
R17	650 ohms 3 W.
R18	5000 ohms 1/3 W.
R19	5000 ohms 1/3 W.

Code No.	CONDENSERS
C1	.05 mfd. paper
C2	8-50 mmfd. mica trim.
C3	Tuning condenser
C4	.01 mfd. paper
C5	50 mmfd. mica (D)
C6	8-50 mmfd. mica trim.
C7	9 mmfd. mica (B)
C8	Tuning condenser
C9	.05 mfd. paper
C10	420 mmfd. mica (Pad.)
C11	115 mmfd. mica (A)
C12	130 mmfd. mica (H)
C13	.05 mfd. paper
C14	115 mmfd. mica (A)
C15	130 mmfd. mica (H)
C16	.05 mfd. paper
C17	.25 mfd. paper
C18	200 mmfd. mica (J)
C19	70 mmfd. mica (N)
C20	200 mmfd. mica (J)
C21	.01 mfd. paper
C22	.05 mfd. paper
C23	.01 mfd. paper
C24	.035 mfd. paper
C25	.0025 mfd. paper
C26	8 mfd. 525V. electro
C27	Deleted
C28	15 mmfd. mica (C)
C29	200 mmfd. mica (J)
C30	.1 mfd. paper
C31	.1 mfd. paper

FISK RADIOLA 404 & 405

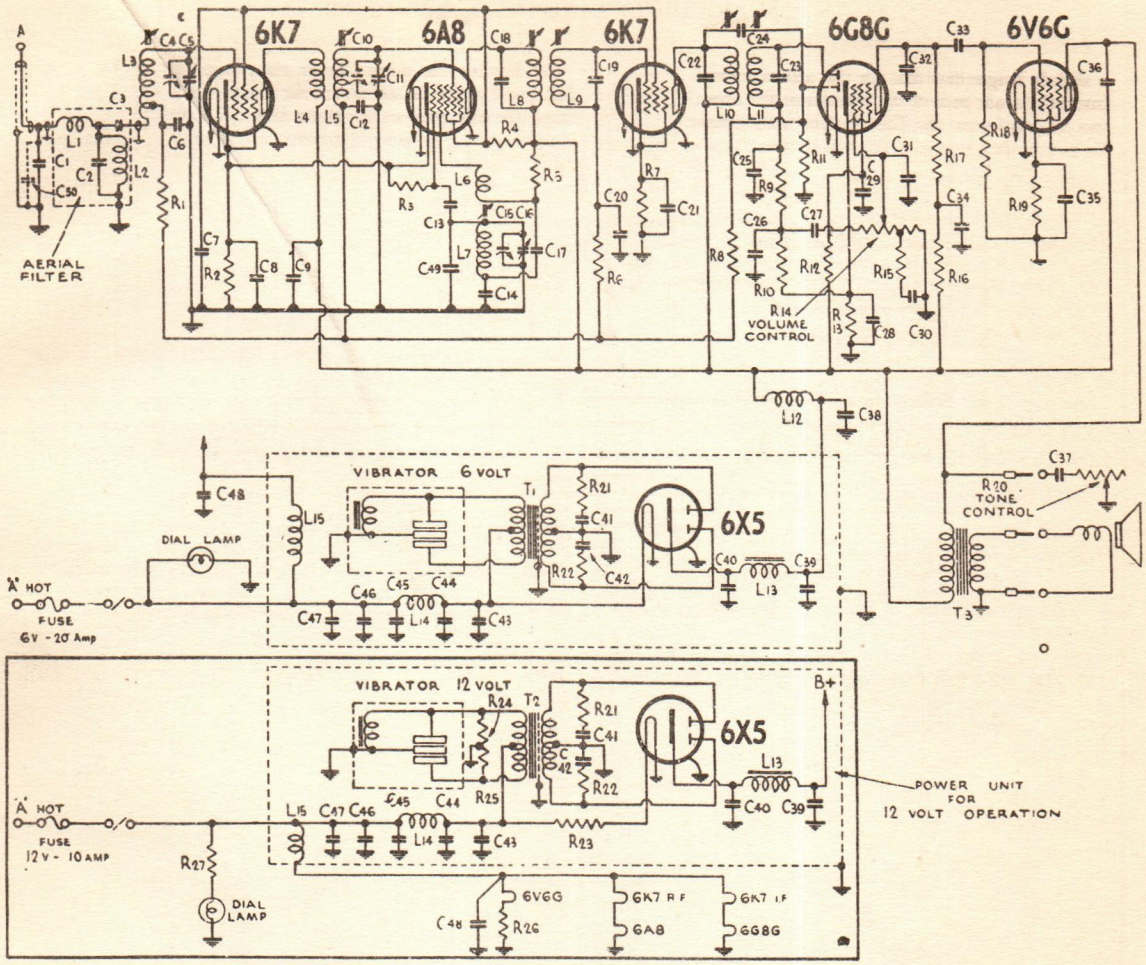
6-Valve Superheterodyne Automobile Receiver

TUNING RANGE:- 200-550 M. (1500-545 K.C.). ALIGNMENT FREQUENCIES:- 600 K.C. 1400 K.C 1500 K.C. INTERMEDIATE FREQUENCY - 460 K.C.

CURRENT DRAIN - 6 Volt Model, 5.5-6 amps. 12 Volt Model, 3.0-3.5 amps.

VALVES:- 6K7 R.F. Amplifier
6A8 Detector-Osc.
6K7 I.F. Amplifier
6G8G Detector, A.V.C. & A.F. Amplifier
6V6G Output
6X5 Rectifier

R1 500,000 ohms, 1/3 watt
R2 200 ohms, 1/3 watt
R3 50,000 ohms, 1/3 watt
R4 30,000 ohms, 1 watt
R5 20,000 ohms, 1/3 watt
R6 1¼ megohms, 1/3 watt
R7 2,000 ohms, 1/3 watt (12V.)
900 ohms, 1/3 watt (6V.)
R8 1¾ megohms, 1/3 watt
R9 100,000 ohms, 1/3 watt
R10 300,000 ohms, 1/3 watt
R11 1 megohm, 1/3 watt
R12 1 megohm, 1 watt
R13 2,000 ohms, 1/3 watt
R14 1 megohm, Vol. Control
R15 Deleted
R16 50,000 ohms, 1/3 watt
R17 200,000 ohms, 1 watt
R18 500,000 ohms, 1/3 watt
R19 300 ohms, 3 watt
R20 100,000 ohms, Tone Control
R21 50 ohms, 1/3 watt
R22 50 ohms, 1/3 watt
R23 10 ohms, wire wound
R24 100 ohms, 1 watt
R25 100 ohms, 1 watt
R26 12.5 ohms, 5 watt
R27 24 ohms, 3 watt
R28 500,000 ohms, 1/3 watt
C1 Spark plate
C2 25 mmfd. mica
C3 .01 mfd. paper
C4 5-30 mmfd. mica trimmer
C5 Variable Condenser
C6 2300 mmfd. mica
C7 .1 mfd. paper
C8 .1 mfd. paper
C9 .1 mfd. paper
C10 5-30 mmfd. mica trimmer
C11 Variable Condenser
C12 3300 mmfd. mica
C13 50 mmfd. mica (D)
C14 350 mfd. mica (padder)
C15 5-30 mmfd. mica trimmer
C16 Variable Condenser
C17 .05 mfd. paper
C18 115 mmfd. mica (A)
C19 115 mmfd. mica (A)
C20 .05 mfd. paper
C21 .1 mfd. paper
C22 115 mmfd. mica (A)
C23 115 mmfd. mica (A)
C24 50 mmfd. mica (D)
C25 300 mmfd. mica
C26 110 mmfd. mica (L)
C27 .02 mfd. paper
C28 5 mfd. electrolytic (25V.)
C29 .1 mfd. paper
C30 Deleted
C31 50 mmfd. mica (D)
C32 450 mmfd. mica
C33 .05 mfd. paper
C34 .1 mfd. paper
C35 25 mfd. 25V. electrolytic
C36 .0025 mfd. paper
C37 .02 mfd. paper
C38 2800 mmfd. mica
C39 8 mfd. 450V. electrolytic
C40 8 mfd. 450V. electrolytic
C41 .02 mfd. 2000V.
C42 .02 mfd. 2000V.
C43 .5 mfd. paper
C44 200 mmfd. mica (J)
C45 .5 mfd. paper
C46 200 mmfd. mica (J)
C47 Spark plate
C48 200 mmfd. mica (J)
C49 14 mmfd. mica (C)
C50 70 mmfd. mica (N)
(For use with Topper and Whip Aerials only—see "Connections").
C51 .05 mfd. paper



Installation

LOCATION.

Determine the proposed location of the Receiver Unit on the bulkhead, giving consideration to the proposed location of the Control Unit, in respect to the lengths of the flexible shafts, and to the external loudspeaker which should be mounted alongside the Receiver Unit if the Radiola 405 is the model involved.

RECEIVER UNIT.

(1) The Receiver Mounting Plate has eight square holes, any convenient three of which may be used for mounting. Using the template supplied, mark the three points selected and drill the bulkhead, using a 3/8 inch drill. Make sure that there is no apparatus behind that may be damaged when drilling. Remove insulating material from around holes on engine side to ensure good contact.

(2) Insert the three bolts in the Mounting Plate and screw it to the Receiver Unit as shown in Fig. 6.

(3) Fit the spacing washers on the mounting bolts, then place the Receiver Unit in position, passing the bolts through the holes drilled in the bulkhead. Assemble the washers, lockwashers and nuts on the bolts from the engine side of the bulkhead, as shown in Fig. 5, and tighten the nuts to hold the Receiver Unit securely.

LOUDSPEAKER (Radiola 405).

Place the loudspeaker mounting template on the bulkhead alongside the Receiver Unit and mark the positions of the mounting holes. Use a 3/8 inch drill to drill the bulkhead. Screw the mounting studs in the rear of the loudspeaker to the required depth then screw a nut on each stud to lock. Mount the loudspeaker, using the nuts and washers supplied, which are fitted from the engine side of the bulkhead.

CONTROL UNIT.

Before mounting the Control Unit, first fit the flexible shafts. Although the shafts are similar, they are not interchangeable. The tuning shaft

is slightly longer than that for the volume control. Insert the spade ends of the shafts into the respective receptacles on the Control Unit and tighten the nipple nuts to make the connections secure.

UNDER-DASH UNIT.

Place the Control Unit in the desired position beneath the dash panel and mark the positions of the two holes in the unit on the panel flange. Drill the panel with a 1/4 inch drill and mount the Control Unit with the nuts and bolts supplied, as shown in Fig. 6.

WARNING.

Use care, when drilling, to avoid damaging panel instruments which may be in the path of drill.

DASH MOUNTING UNIT.

(1) Remove the front nut from each shaft.

(2) Fit circular pointer to the pointer spindle, using the screw supplied.

(3) Packed with the Trim Plate will be found a card showing a list of cars and the corresponding correct locations of the rear mounting nuts. Set the nuts at the correct positions. For example, if the car is a 1938 Chevrolet, the distance between the front face of each nut and the end of the threaded shaft should be 1/4 inch.

(4) Remove the dummy cover plate from the dash panel of the car and mount the Control Unit, fitting the trim plate on the shafts from the front of the panel and replacing and tightening the nuts previously removed.

(5) Fit the control knobs supplied.

REPLACEMENT VIBRATORS.

When replacing an ELECTRONIC vibrator with an OAK Type 17XH for 6 volt receivers or Type 18XH for 12 volt receivers it will be necessary to alter the vibrator socket wiring and bend the fingers of the clip to make contact with the vibrator case.

The earth lead must be removed from socket contact No. 4 and a short insulated lead connected from this contact to the L.T., R.F. Choke as shown in the diagram—fig. 15. It will be necessary to remove the chassis from the case to do this.

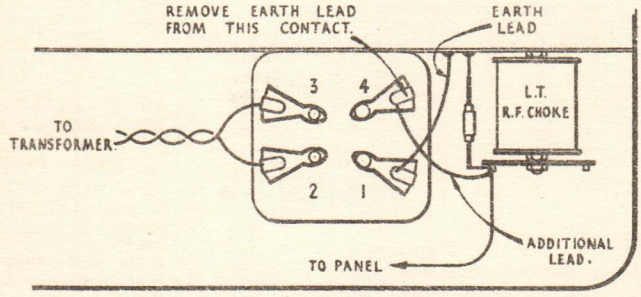


Fig. 15.—Replacement Vibrator Connections.

SOCKET VOLTAGES.

VALVE	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K7 R.F. Amp.	3.0	97	250	6.75	6.0
6A8 Detector	3.0	97	250	2.75	6.0
Oscillator	—	—	175	3.5	—
6K7 I.F. Amp.	5.0	97	250	3.0	6.0
6G8G Detector	2.0	30*	55*	0.7	6.0
6V6G Output	12.5	250	235	35	6.0

Total plate current, 55 milliamps.

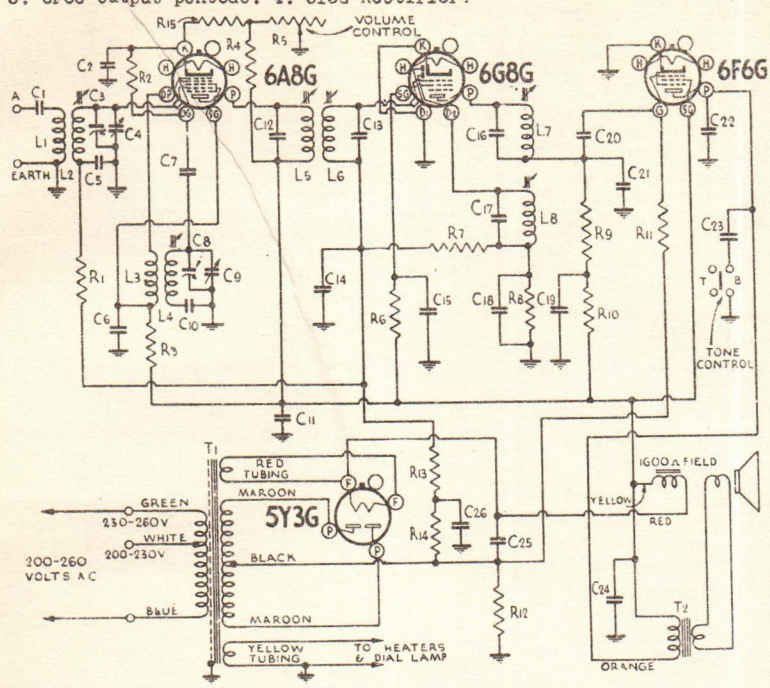
Measured with no signal input.

* Cannot be measured with ordinary voltmeter.

FISK RADIOLA 48G

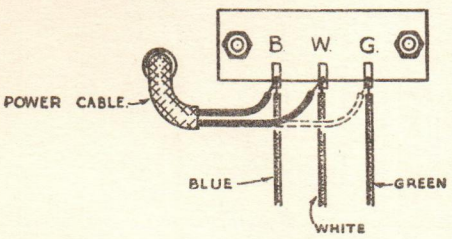
4-Valve, Medium Wave, A.C. Operated Superheterodyne

Tuning Frequency Range - 1500-550 K.C. R.F. Alignment Frequencies - 600 K.C. & 1400 K.C. Intermediate Frequency - 460 K.C. Power Consumption - 50 watts. Loudspeaker Field Coil Resistance - 1600 ohms.
VALVE COMPLEMENT - 1. 6A8G Detector-Oscillator. 2. 6G8G I.F. amp., 2nd Det., A.V.C. & A.F. amp. 3. 6F6G Output pentode. 4. 5Y3G Rectifier.



C1 - 500mmfd mica
C2 - .1mfd paper
C3 - 2-10 mmfd air trimmer
C4 - Tuning Condenser
C5 - .05mfd paper
C6 - .1mfd paper
C7 - 110 mmfd mica (L)
C8 - 16-24mmfd air trimmer
C9 - Tuning Condenser
C10- 440mmfd mica (Padder)
C11- .1mfd paper
C12 - 115mmfd mica (A)
C13- 130 mmfd mica (H)
C14- 110mmfd mica (L)
C15- .1mfd paper
C16- 115mmfd mica (A)
C17- 130mmfd mica (H)
C18- 110mmfd mica (L)
C19- .1mfd paper
C20- .01mfd paper
C21- 700mmfd mica
C22- .005mfd paper
C23- .02mfd paper
C24- 8mfd 500V Electrolytic
C25- 8mfd 500V Electrolytic
C26- .1mfd paper
R1 - 1.75 megohms, 1/3 Watt
R2 - 60,000 ohms, 1/3 Watt
R3 - 11,000 ohms, 3 Watt
R4 - 25,000 ohms, 3 Watt
R5 - 3,000 ohms, Vol.Cont.
R6 - 500,000 ohms, 1 Watt
R7 - 250,000 ohms, 1/3 Watt
R8 - 200,000 ohms, 1/3 Watt
R9 - 70,000 ohms, 1 Watt
R10- 20,000 ohms, 1 Watt

R11- 500,000 ohms,1/3 Watt R12- 300 ohms,3 Watt R13- 5 meg. 1 Watt
R14- 500,000 ohms,1/3 Watt R15- 200 ohms, 1/3 Watt



Showing Power Cable Connections for Line Voltages below 230V. (dotted lead indicates "standard" connection).

VALVE	BIAS VOLTAGES	SCREEN GRID VOLTS	PLATE VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6A8G Detect.	-1.5‡	2.5† 120	250	3.5	6.3
Oscillator	-	-	120	3.5	-
6G8G Reflex Amplifier	-1.5‡	50*	97*	1.7	6.3
6F6G Pentode	-17.0‡	250	225	26.0	6.3

5Y3G Rect. 680/340 volts,60M.A. Total current. 5.0
Voltage across loudspeaker field - 96 volts.

* Cannot be measured with ordinary voltmeter.
‡ Control Grid to chassis. Cannot be measured with ordinary voltmeter.
† Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control in maximum clockwise position.

FISK RADIOLA 53G

4-Valve, Two Band, D.C. Operated Superheterodyne, Mantel

Tuning Frequency Ranges - Medium Wave "A" 1500-550 K.C. Short Wave "B" 16-50M. R.F. Alignment Frequencies - Medium Wave 600 K.C. 1400 K.C. Short Wave 18 M. Intermediate Freq. 460 K.C. Power Supply Rating - 200-260 Volts, D.C. VALVE COMPLEMENT - 1. 6A8G Detector-Osc. 2. 6U7G I.F. Amp. 3.6G8G I.F. Amp., 2nd Det., A.V.C. & A.F. Amp. 4. 43 Output Pentode Loudspeaker Field Coil Res.-1000 ohms.

R1 - 100,000 ohm 1/3 Watt
R2 - 40,000 ohms 1/3 Watt
R3 - 500,000 ohm 1/3 Watt
R4 - 300 ohms 1/3 Watt
R5 - 200 ohm 1/3 Watt
R6 - 400 ohm 1/3 Watt
R7 - 400 ohm 1/3 Watt
R8 - 10,000 ohm 1 Watt
R9 - 20,000 ohm 1Wat
R10- 600 ohm 1/3W
R11- 2,000 ohm "
R12- 1.75 meg. "
R13- " " "
R14- " " "
R15- 2,000 ohm "
R16- 500,000 ohms 1 Watt
R17- 500,000 ohms Vol.Control
R18- 500,000 ohms 1/3 Watt
R19- 70,000 ohms 1 Watt
R20- 500,000 ohm 1/3 Watt
R21- 100,000 ohm 1/3 Watt
R22- 500 ohms 1 Watt
R23- 5,000 ohms 1 Watt
R24- 100,000 ohms Tone Control
C1 - 500mmfd mica
C2 - " " "
C3 - 4mmfd mica
C4 - Air Trimmer 2-10mmfd
C5- Air Trim.2-20 mmfd
C6- Tuning Cond.
C7 - .05mfd pap.
C8 - .5mfd pap.
C9 - .1mfd pap.
C10- .1mfd pap.
C11- 350mmfd mica
C12- .1mfd paper
C13- .1mfd paper
C14- 16-34mmfd Air Trimmer
C15- 440mmfd mica (Padder)
C16- 2-10mmfd Air Trimmer
C17- 3500mmfd mica (Padder)
C18- Tuning Cond.
C19- .05mfd paper
C20- 5mfd paper
C21- .1mfd paper
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- .1mfd paper
C25- 115mmfd mica (A)
C26- 130mmfd mica (H)

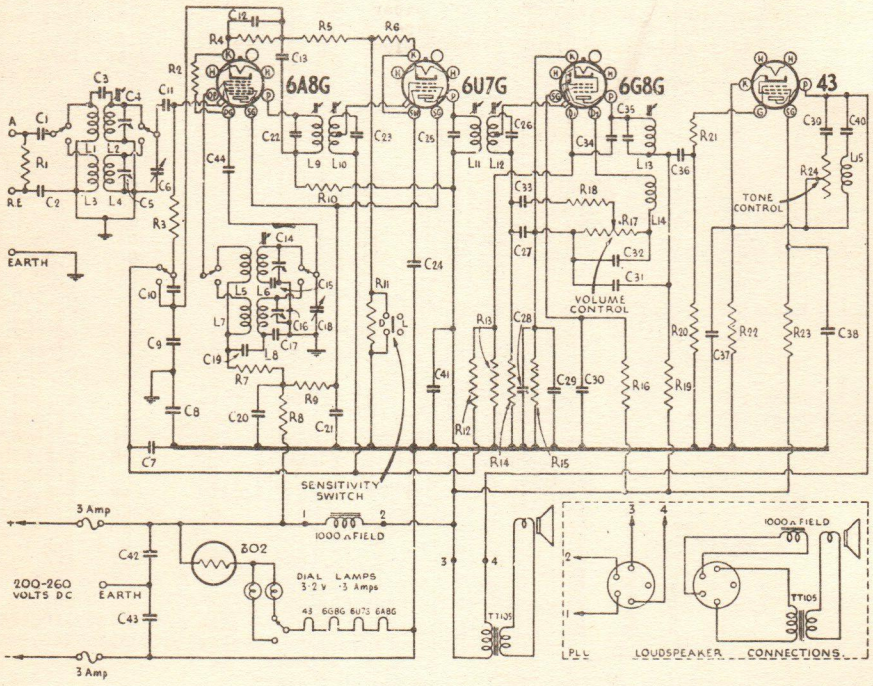
FISK RADIOLA 53G (Contd.)

C27- 110mmfd mica (L)
C28- 25mfd 25V Elect.
C29- .02mfd paper
C30- .1mfd paper
C31- 700mmfd mica
C32- 110mmfd mica (L)
C33- .01mfd paper
C34- 50mmfd mica (D)
C35- 70mmfd mica (N)
C36- .01mfd paper
C37- 25mfd 25V Elect.
C38- .5mfd paper
C39- .035mfd paper
C40- 3500mmfd mica
C41- 5mfd paper
C42- .1mfd paper
C43- .1mfd paper
C44- 110mmfd mica (L)

VALVE	CATHODE TO NEGATIVE VOLTS	SCREEN GRID TO NEG. VOLTS	PLATE TO NEG. VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6A8G Detect.					
M.W.	3.75	70	180	1.5	6.3
S.W.	4.25	70	180	2.5	-
Oscillator					
M.W.		-	155	4.0	-
S.W.		-	155	3.7	-
6U7G I.F.Amp.	2.75	70	180	5.0	6.3
6G8G Reflex					
Amp.	2.25	30	105*	1.0	6.3
43 Pentode	20.0	145	165	38.0	25.0

Voltage across loudspeaker field 54.0 volts.

*Cannot be measured with ordinary voltmeter. Measured at 240 volts D.C. supply no signal input.Controls in max. clockwise position. Sensitivity switch in distant (D) position.



FISK RADIOLA 49G AND 49GV

4-Valve, Medium Wave Band, Battery Operated Superheterodyne, Mantel

Tuning Frequency Range - 1500-550 K.C. R.F. Alignment Frequencies - 600 K.C. 1400 K.C.
Intermediate Frequency - 460 K.C.

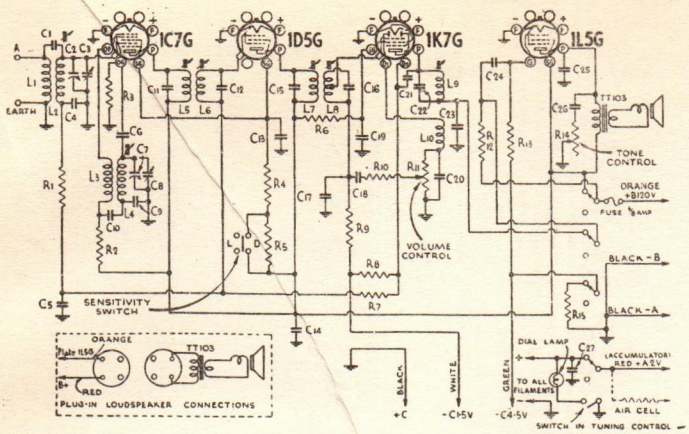
Current Consumption	49G	49GV
"A" Battery at 2 volts	0.54 amps	
"A" Battery at 6 volts		1.2 amps
"B" Battery at 120 volts	10 M.A.	(Supplied from Vibrator Power Unit)

VALVES:- 1. 1C7G Detect. Osc. 2. 1D5G I.F. Amp. 3. 1K7G Amp.,Detect.,A.V.C. and A.F. Amp. 4. 1L5G - Output Pentode

VALVE		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G	Detector	-1.5*	30	120	0.25	2.0
	Oscillator	-	-	55	1.25	-
1D5G	I.F. Amplifier .	-1.5*	30	120	0.65	2.0
1K7G	Reflex Amp.	-1.5*	45*	80*	0.4	2.0
1L5G	Pentode	4.5*	120	115	4.5	2.0

*Cannot be measured with ordinary voltmeter. Measured with no signal input,Vol.Cont. at max. and Sensitivity switch in Distant (D) pos.

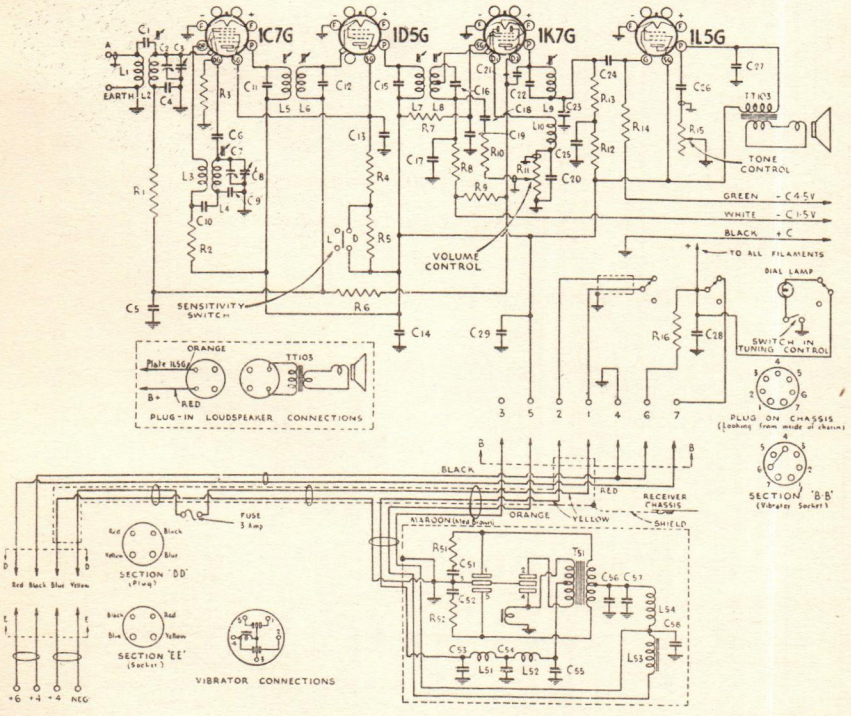
FISK RADIOLA 49G (Contd.)



R1 - 100,000 ohms1/3W
R2 - 50,000 ohms 1 W
R3 - 60,000 ohms 1/3W
R4 - 70,000 ohms 1W
R5 - 100,000 ohms 1W
R6 - 500,000 ohms 1W
R7 - 1.75meg. 1/3W
R8 - 1.75meg. 1/3W
R9 - 1.75meg. 1/3W
R10- 500,000 ohms 1/3W
R11- 500,000 ohms Vol. control
R12- 100,000 ohms 1W
R13- 500,000 ohms 1/3 Watt
R14- 100,000 ohms tone control
R15- 750 ohms 1 Watt
C1 - 4mmfd mica
C2 - 2-10mmfd air trimmer
C3 - Tuning Cond.
C4 - .05mfd paper
C5 - .05mfd paper
C6 - 110mmfd mica)L)
C7 - 16-34mmfd air trimmer
C8 - Tuning Cond.
C9 - 440mmfd mica (padder)
C10- .05mfd paper
C11- 115mmfd mica (A)

C12- 130mmfd mica (H)
C13- .1mfd paper
C14- .5mfd paper
C15- 115mmfd mica (A)
C16- 130mmfd mica (H)
C17- 110mmfd mica (L)
C18- .01mfd paper
C19- .1mfd paper
C20- 110mmfd mica (L)
C21- 50mmfd mica (D)
C22- 70mmfd mica (N)
C23- 700mmfd "
C24- .01mfd pap.
C25- .0025mfd paper
C26- .035mfd paper
C27- .5mfd paper

FISK RADIOLA 49GV (Contd.)



VIBRATOR POWER UNIT
R51- 50 ohms 1/3 Watt
R52- 50 ohms 1/3 Watt
C51- .02mfd paper
C52- .02mfd paper
C53- .1mfd paper
C54- .25mfd paper
C55- .25mfd paper
C56- 8mfd 450V Elect.
C57- .02mfd paper
C58- .5mfd paper

R1 - 100,000 ohms1/3W
R2 - 50,000 ohms 1W
R3 - 60,000 ohms 1/3W
R4 - 70,000 ohms 1W
R5 - 100,000 ohms 1W
R6 - 1.75meg. 1/3W
R7 - 500,000 ohms 1W
R8 - 1.75meg. 1/3W
R9 - 1.75meg. 1/3W
R10- 500,000 ohms1/3W
R11- 500,000 ohms Vol. cont.
R12- 20,000 ohms 1W
R13- 100,000 ohms 1W
R14- 500,000 ohms1/3W
R15- 100,000 ohms Tone Control
R16- 4.5 ohms W/W
C1 - 4mmfd mica
C2 - 2-10mmfd air trimmer
C3 - Tuning Cond.
C4 - .05mfd paper
C5 - .05mfd paper
C6 - 110mmfd mica (L)

C7 - 16-34mmfd air trim.
C8 - Tuning Cond.
C9 - 440mmfd mica (Padder)
C10- .05mfd paper
C11- 115mmfd mica (A)
C12- 130mmfd mica (H)
C13- .1mfd paper
C15- 115mmfd mica (A)
C14- .5mfd paper
C16- 130mmfd mica (H)
C17- 110mmfd mica (L)
C18- .01mfd paper
C19- .1mfd paper
C20- 110mmfd mica (L)
C21- 50mmfd mica (D)
C22- 70mmfd mica (N)
C23- 700mmfd mica
C24- .01mfd paper
C25- .5mfd paper
C26- .035mfd paper
C27- .0025mfd paper
C28- .5mfd paper
C29- 8mfd 450V Electrolytic

FISK RADIOLA 50G AND 50GV

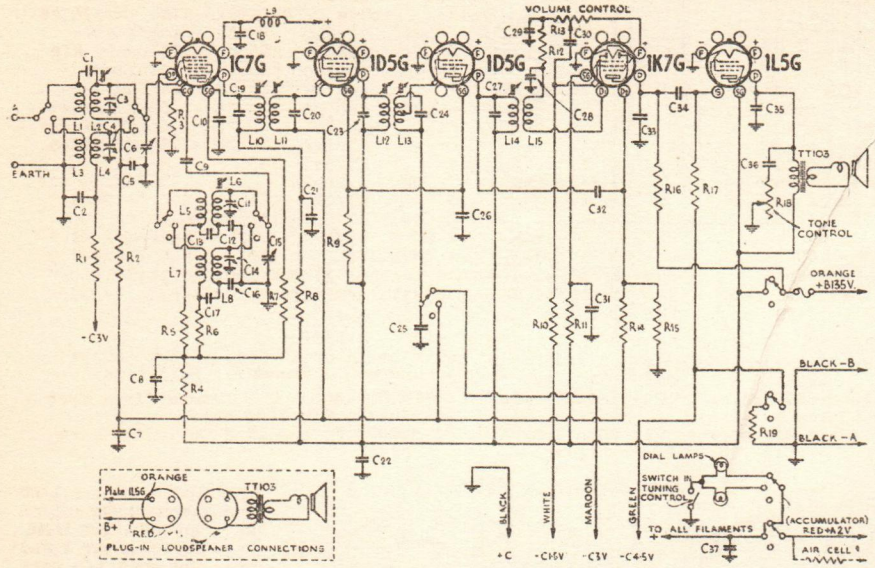
5-Valve, Two Band, Battery Operated Superheterodyne, Mantel

Tuning Freq.Ranges - Medium Wave "A" 1500-550 K.C. S/W "B" 16-50M. R.F. Align.Freq.- Medium Wave- "A" 600 K.C. 1400 K.C. S/W "B" 18M. Intermediate Freq.- 460 K.C.

Current Consumption -	50G	50GV
"A" Battery at 2 volts	0.60 amps	
"A" Battery at 6 volts		1.2 amps
"B" Battery at 135 volts	13-15 M.A. (supplied from vibrator power unit)	

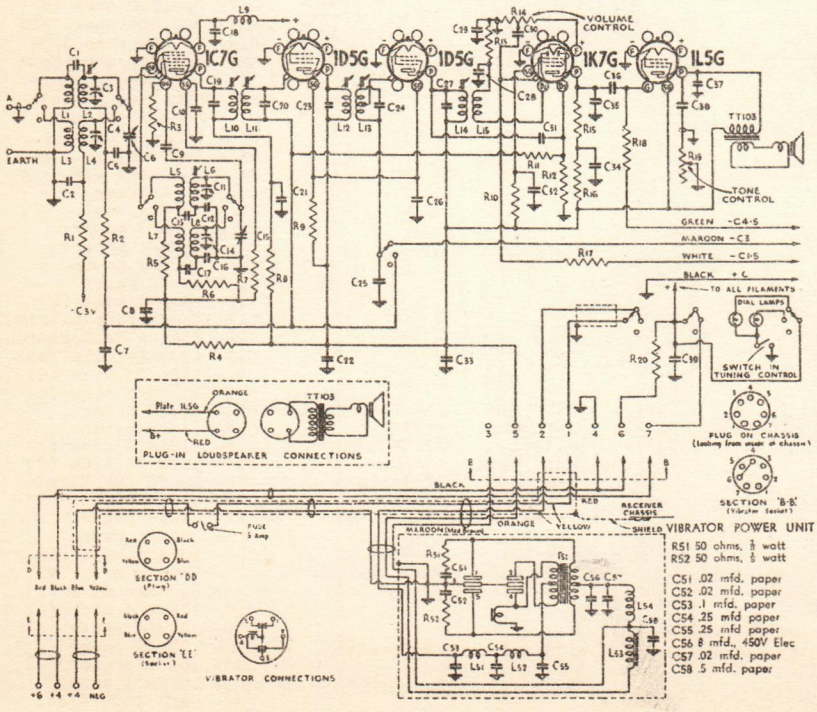
FISK RADIOLA 50G & 50GV (Contd.)

VALVE COMPLEMENT - 1. 1C7 Detect.-Oscillator. 2. 1D5G I.F. Amp. 3. 1D5G I.F. Amplifier. 4. 1K7G 2nd Det., A.V.C. and A.F. Amp. 5. 1L5G Output Pentode.



R1 - 100,000 ohms 1/3 Watt
R2 - " " " "
R3 - 40,000 ohms 1/3 Watt
R4 - 5,000 ohms 1W
R5 - 40,000 ohms "
R6 - 400 ohms 1/3W
R7 - 40,000 ohms 1W
R8 - 300 ohms 1/3W
R9 - 250,000 ohms 1W
R10- 1.75meg.1/3W
R11- 1meg. 1 Watt
R12- 100,000 ohms 1/3 Watt
R13- 500,000 ohms vol.control
R14- 1.75meg.1/3W
R15- 1.75meg.1/3W
R16- 250,000 ohms 1 Watt
R17- 500,000 ohms 1/3 Watt
R18- 100,000 ohms Tone Control
R19- 600 ohms 1 W
C1 - 4mmfd mica
C2 - .05mfd paper
C3 - 2-10mmfd air trimmer
C4 - 2-20mmfd air trimmer
C5 - .05mfd paper
C6 - Tuning Cond.
C7 - .02mfd paper
C8 - 8mfd 450V elec.
C9 - 110mmfd mica (L)
C10- .1mfd paper
C11- 16-34mmfd air trimmer
C12- 440mmfd mica (Padder)
C13- .05mfd paper
C14- 2-10mmfd air trimmer
C15- Tuning Cond.
C16- 3500mmfd mica (padder)
C17- .05mfd paper
C18- .1mfd paper
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- .5mfd paper
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)
C25- .02mfd paper
C26- .1mfd paper
C27- 70mmfd mica (N)
C28- 110mmfd mica (L)
C29- 110mmfd mica (L)
C30- .01mfd paper
C31- .1mfd paper
C32- 50mmfd mica (D)
C33- 110mmfd mica (L)
C34- .01mfd paper
C35- .0025mfd "
C36- .035mfd paper
C37- .5mfd paper

FISK RADIOLA 50GV



R1 - 100,000 ohms 1/3W
R2 - 100,000 ohms 1/3W
R3 - 40,000 ohms 1/3W
R4 - 5,000 ohms 1 Watt
R5 - 40,000 ohms 1 Watt
R6 - 400 ohms 1/3 Watt
R7 - 40,000 ohms 1 Watt
R8 - 300 ohms 1/3 Watt
R9 - 250,000 ohms 1 Watt
R10- 1meg. 1 Watt
R11- 1.75meg. 1/3 Watt
R12- 1.75 meg. 1/3 Watt
R13- 100,000 ohms 1/3W
R14- 500,000 ohms Vol. Control
R15- 250,000 ohms 1W
R16- 50,000 ohms 1W
R17- 1.75meg. 1/3 Watt
R18- 500,000 ohms 1/3W
R19- 100,000 ohms Tone Control
R20- 4.5 ohms W/Wound
C1 - 4mmfd mica
C2 - .05mfd paper
C3 - 2-10mmfd air trim.
C4 - 2-20mmfd air trim.
C5 - .05mfd paper
C6 - Tuning Condenser
C7 - .02mfd paper
C8 - 8mfd 450V Elect.
C9 - 110mmfd mica (L)
C10- .1mfd paper
C11- 16-34mmfd air trim
C12- 440mmfd mica (Pad)
C13- .05mfd paper
C14- 2-10mmfd air trim
C15- Tuning Condenser
C16-3500mmfd mica(Pad)

VIBRATOR POWER UNIT
R51 50 ohms, ½ watt
R52 50 ohms, ½ watt
C51 .02 mfd. paper
C52 .02 mfd. paper
C53 .1 mfd. paper
C54 .25 mfd paper
C55 .25 mfd paper
C56 8 mfd., 450V Elec
C57 .02 mfd. paper
C58 .5 mfd. paper

FISK RADIOLA 50GV (Contd.)

C17- .05mfd paper
C18- .1mfd pap.
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- .5mfd pap
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)
C25- .02mfd paper
C26- .1mfd pap
C27- 70mmfd mica (N)
C28- 110mmfd mica (L)
C29- 110mmfd mica (L)
C30- .01mfd paper
C31- 50mmfd mica (D)
C32- .1mfd pap
C33- 8mfd 450V elect.
C34- .5mfd pap
C35- 110mmfd mica (L)
C36- .01mfd paper
C37- .0025mfd paper
C38-035mfd pap
C39- .5mfd pap.

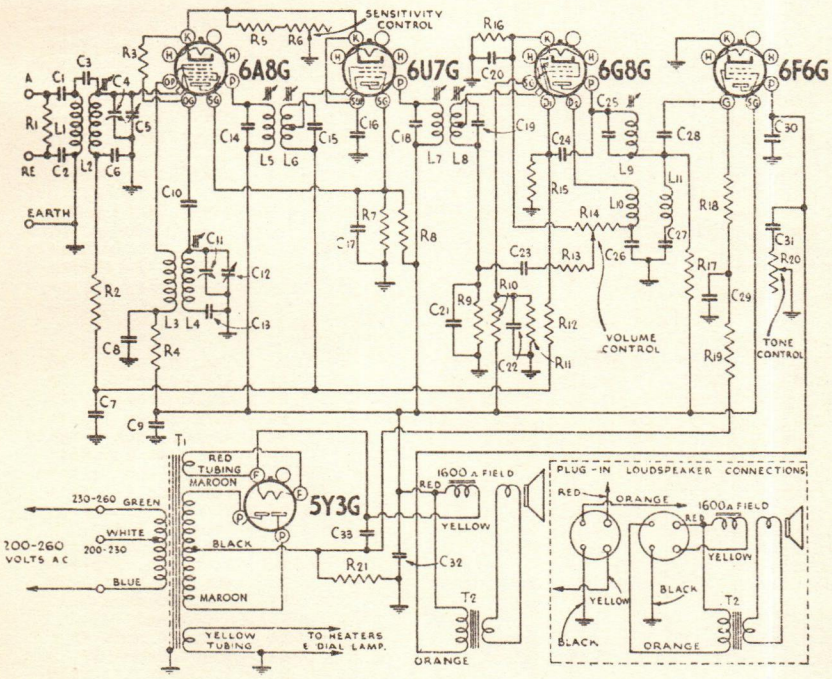
VALVE	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G Detect.					
M.W.	0	45	135	1.8	2.0
S.W.	-3*	45	135	1.0	-
Oscillator M.W.	-	-	65	1.3	-
S.W.	-	-	110	3.3	-
1D5G I.F. Amp.					
M.W.	0	23	135	1.2	2.0
S.W.	0	27	135	0.8	-
1D5G I.F. Amp.					
M.W.	-3*	23	135	0.2	2.0
S.W.	0	27	135	0.8	-
1K7G Detector	-1.5*	35*	95*	0.2	2.0
1L5G Pentode	-4.5*	135	130	6.0	2.0

Measured with volume control at maximum. No signal.
*Cannot be measured with ordinary voltmeter.

FISK RADIOLA 51G

5-Valve, Medium Wave, A.C. Operated Superheterodyne, Mantel

Tuning Freq. Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C. 1400 K.C. Intermediate Freq.- 460 K.C. Power Consumption 50 watts. Loudspeaker Field Coil Resistance 1600 ohms.
VALVE COMPLEMENT - 1. 6A8G Detect.-Osc. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,2nd Det., A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier.



VALVE	BIAS VOLTS	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	4.5†	70	250	1.0	6.3
Oscillator	-	-	165	3.25	-
6U7G I.F. Amplifier	4.5†	70	250	2.0	6.3
6G8G Reflex Amp.	1.25†	30*	125*	0.5	6.3
6F6G Pentode	16.0**	250	230	35.0	6.3
5Y3G Rectifier	680/340 volts, 57 M.A. total current.				5.0
Voltage across loudspeaker field					90 volts

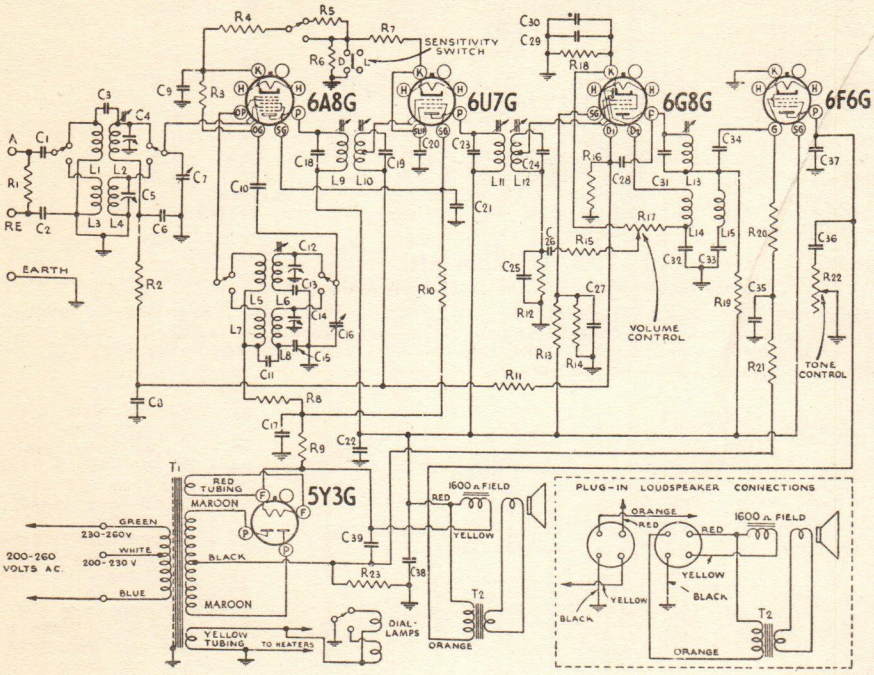
*Cannot be measured with ordinary voltmeter
**Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to Chassis.
Measured at 240 volts A.C. supply. No signal
Volume and sensitivity controls at maximum.

R1 - 100,000 ohms 1/3W
R2 - 100,000 ohms 1/3W
R3 - 60,000 ohms 1/3W
R4 - 20,000 ohms 1 Watt
R5 - 500 ohms 1/3 Watt
R6 - 3,000 ohms Sens. Control
R7 - 30,000 ohms 1 Watt
R8 - 30,000 ohms 1 Watt
R9 - 1.75 meg. 1/3 Watt
R10- 1meg. 1 Watt
R11- 250,000 ohms 1 W
R12- 1.75 meg. 1/3Watt
R13- 500,000 ohms 1/3W
R14- 500,000 ohms Vol. Control
R15- 1.75meg. 1/3 Watt
R16- 2,000 ohms 1/3W
R17- 250,000 ohms 1W
R18- 500,000 ohms 1/3W
R19- 50,000 ohms 1/3W
R20- 100,000 ohms Tone Control
R21- 300 ohms, 3 Watt
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-10mmfd air trimmer
C5 - Tuning Cond.
C6 - .05mfd paper
C7 - .05mfd paper
C8 - .05mfd paper
C9 - .1mfd paper
C10-110mmfd mica (L)
C11-16-34mmfd air trim
C12- Tuning Condenser
C13- 440mmfd mica Pad.
C14- 115mmfd mica (A)
C15- 130mmfd mica (H)
C16- .1mfd paper
C17- .1mfd paper
C18- 115mmfd mica (A)
C19- 130mmfd mica (H)
C20- 25mfd 25V Elect.
C21- 110mmfd mica (L)
C22- .1mfd paper
C23- .01mfd paper
C24- 50mmfd mica (D)
C25- 70mmfd mica (N)
C26- 110mmfd mica (L)
C27- 115mmfd mica (A)
C28- .01mfd paper
C29- .05mfd paper
C30- .005mfd paper
C31- .035mfd paper
C32- 8mfd 450V Elec.
C33- 8mfd 500V Elec.

FISK RADIOLA 52G

5-Valve, Two Band, A.C. Operated Superheterodyne, Mantel

Tuning Freq. Ranges - Medium Wave "A" 1500-550 K.C. Short Wave "B" 16-50M.
R.F. Alignment Freq. - Medium Wave - 600 K.C. 1400 K.C. Short Wave 18M. Intermediate Freq.-460 K.C.
Power Consumption - 50 watts. Loudspeaker Field Coil Resistance - 1600 ohms.
VALVE COMPLEMENT - 1. 6A8G Detect.-Osc. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,2nd Det.,A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier.



R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 40,000 ohms 1/3 Watt
R4 - 450 ohms 1/3W
R5 - 200 ohms 1/3W
R6 - 2,000 ohms "
R7 - 900 ohms "
R8 - 10,000 ohms1W
R9 - 15,000 ohms2W
R10- 20,000 ohms1W
R11- 1.75meg.1/3W
R12- " " " "
R13- 1meg. 1 Watt
R14- 250,000 ohms 1 Watt
R15- 500,000 ohms 1/3 Watt
R16- 1.75meg.1/3W
R17- 500,000 ohms Vol.control
R18- 2,000 ohms 1/3 Watt
R19- 250,000 ohms 1 Watt
R20- 500,000 ohms 1/3 Watt
R21- 50,000 ohms 1/3 Watt
R22- 100,000 ohms Tone Cont.
R23- 300 ohms,3W
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica

SOCKET VOLTAGES

VALVE	BIAS VOLTS	SCREEN GRID TO CHASSIS VOLTS	PLATE TO CHASSIS VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6A8G Detect.	6.5†	90	250	1.0	6.3
M.W.					
S.W.	5.0†	90	250	1.5	-
Osc.	-	-	130	5.0	-
6U7G I.F.Amp.	5.0†	90	250	4.5	6.3
6G8G Reflex Amp.	1.3†	30*	125*	0.5	6.3
6F6G Pentode	-16*	250	230	35.0	6.3

5Y3G Rectifier 680/340 Volts,57M.A. Total Current 5.0
Voltage across Loudspeaker Field ... ... 90 volts.
*Cannot be measured with ordinary voltmeter
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to Chassis.
Measured at 240 volts A.C. supply. No Signal. Volume Control at max. and Sensitivity Switch at Distant (D).

C4 - 2-10mmfd air trimmer
C5 - 2-20mmfd air trimmer
C6 - .05mfd paper
C7 - Tuning Condenser
C8 - .05mfd paper
C9 - .1mfd paper
C10- 110mmfd mica (L)
C11- .05mfd paper
C12- 16-34mmfd air trimmer
C13- 440mmfd mica (pad)
C14- 2-10mmfd air trimmer
C15- 3500mmfd mica (pad)
C16- Tuning condenser
C17- 8mfd 450V elect.
C18- 115mmfd mica (A)
C19- 130mmfd mica (H)
C20- .1mfd paper
C21- .1mfd paper
C22- .1mfd paper
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)

C25- 110mmfd mica (L)
C26- .01mfd pap
C27- .1mfd paper
C28- 50mmfd mica (D)
C29- 25mfd 25V elec.
C30- .02mfd paper
C31- 70mmfd mica (N)
C32- 110mmfd mica (L)
C33- 115mmfd mica (A)
C34- .01mfd pap.
C35- .05mfd pap
C36- 035mfd pap
C37- .005mfd pap
C38- 8mfd 450V Elect.
C39- 8mfd 500V elect.

FISK RADIOLA 56

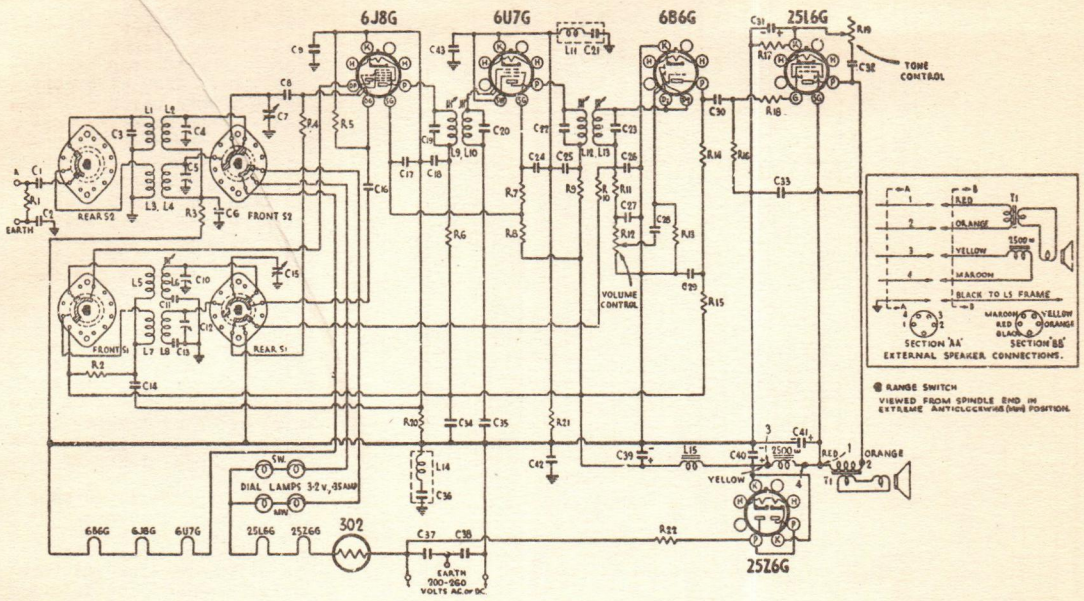
5 **5-Valve, Two Band, Universal A.C./D.C. Operated Superheterodyne** 10

TUNING RANGES - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" - 13.6-43M.
R.F. Alignment Settings - "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc.,and Aerial) "Short Wave" - 15M. Intermediate Frequency - 460 K.C.
VALVE COMPLEMENT - 6J8G Converter. 6U7G I.F. Amp. 6B6G 2nd det.,A.V.C. & A.F. Amp. 25L6G Output Pentode. 25Z6G Rectifier. 302 Barretter.
Dial Lamps - 3.2V., 0.35 Amp.

Undistorted Power Output - 2.2 watts.

WARNING: Two earth terminals are provided, one on the chassis, marked "R.E.", and the other on the Filter Unit. In practically all cases quieter reception is obtained with an earth wire connected to the latter. Do not connect an earth wire to any other component of the instrument.

FISK RADIOLA 56 (Contd.)



Code No.	COILS
L1, L2	Aerial Coil, 1600-550 K.C.
L3, L4	Aerial Coil, 13.6-43M
L5, L6	Osc. Coil, 1600-550 K.C.
L7, L8	Osc. Coil, 13.6-43M.
L9, L10	1st I.F. Transformer.
L11, C21	Filter Unit.
L12, L13	2nd I.F. Transformer.
L14, C36	Filter Unit.
L15	Filter Choke.
	TRANSFORMERS
T1	Loudspeaker Transformer.

Code No.	RESISTORS
R1	100,000 ohms 1/3 W.
R2	20,000 ohms 1 W.
R3	400 ohms 1/3 W.
R4	500,000 ohms 1/3 W.
R5	30,000 ohms 1/3 W.
R6	600 ohms 1/3 W.
R7	600 ohms 1/3 W.
R8	15,000 ohms 2 W.
R9	600 ohms 1/3 W.
R10	1.75 megohms 1/3 W
R11	60,000 ohms 1/3 W.
R12 5707	500,000 ohms Vol. Control.
R13	10 megohms 1 W.
R14	200,000 ohms 1 W.
R15	50,000 ohms 1 W.
R16	390,000 ohms 1/3 W.
R17	150 ohms 3 W.
R18	50,000 ohms 1/3 W.
R19 4540	100,000 ohms Tone Control.
R20	300 ohms 1/3 W.
R21	600 ohms 1/3 W.
R22	100 ohms 3 W.
R23	20,000 ohms 1 W

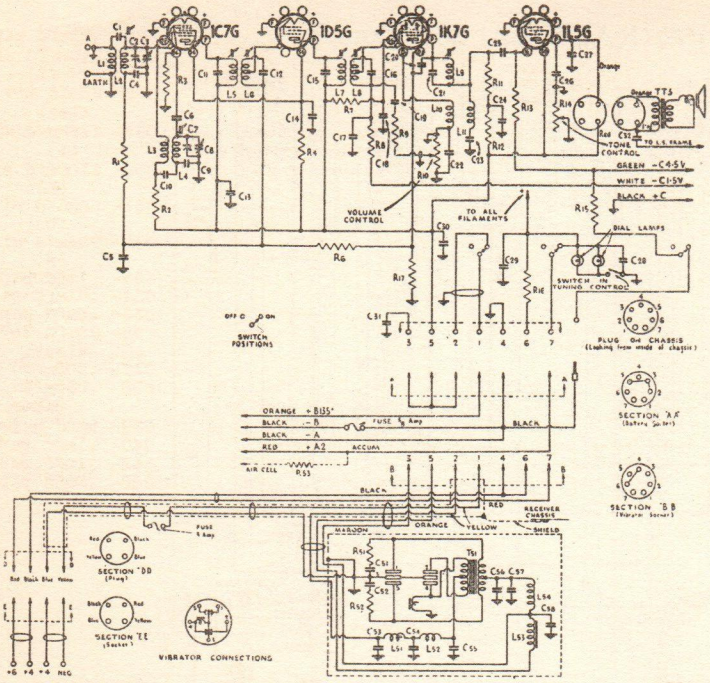
Code No.	Part No.	CONDENSERS
C1		500 mmfd. mica.
C2		500 mmfd. mica.
C3		50 mmfd. mica (D)
C4	3661	2-20 air trimmer.
C5	3411A	11-29 air trimmer.
C6		.02 mfd. paper.
C7	4577	Tuning condenser.
C8		350 mmfd. mica.
C9		.02 mfd. paper.
C10	3411A	11-29 mfd. air trim.
C11		420 mmfd. mica (padder).
C12	3658	2-10 mmfd. air trim
C13		3,500 mmfd. mica (padder).
C14		.05 mfd. paper.
C15	4577	Tuning condenser.
C16		70 mmfd. mica (N).
C17		.1 mfd. paper.
C18		.1 mfd. paper.
C19		70 mmfd. mica (N)
C20		70 mmfd. mica (N)
C21		3,500 mmfd. mica
C22		70 mmfd. mica (N)
C23		70 mmfd. mica (N).
C24		.1 mfd. paper.
C25		.1 mfd. paper.
C26		110 mmfd. mica (L).
C27		110 mmfd. mica (L).
C28		.01 mfd. paper.
C29		.5 mfd. paper.
C30		.01 mfd. paper.
C31		25 mfd., 25V. electrolytic.
C32		.1 mfd. paper.
C33		.0025 mfd. paper
C34		.1 mfd. paper.
C35		.05 mfd. paper.
C36		3,500 mmfd. mica
C37		.1 mfd. paper.
C38		.1 mfd. paper.
C39		16 mfd., 450V. electrolytic.
C40		8 mfd. 500V. electrolytic.
C41		8 mfd. 500V. electrolytic.
C42		.01 mfd. paper.
C43		.01 mfd. paper.

SOCKET VOLTAGES.

VALVE.	Cathode to Negative. Volts.	Screen Grid to Negative. Volts.	Plate to Negative. Volts.	Plate Current M.A.	Heater. Volts.
6J8G Detector, M.W ..	2.5	80	205	1.0	6.3
S.W. ..	2.5	80	205	1.5	—
Oscillator, M.W.	—	—	125	4.0	—
S.W.	—	—	125	4.0	—
6U7G I.F. Amplifier ..	3.5	80	205	4.5	6.3
6B6G 2nd Det.	0	—	120	0.35	6.3
25L6G Output	7.0	105	85*	38	25.0
25Z6G Rectifier	230	—	235	—	25.0

Voltage across loudspeaker field—120 volts.
* Cannot be measured with ordinary voltmeter.
Measured at 240 volts D.C. No signal.
Volume control in maximum clockwise position.

FISK RADIOLA, MODEL 174

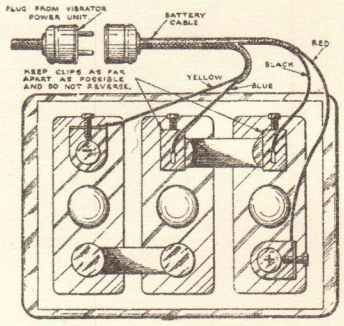


Vibrator Power Unit.
R51 - 50 ohms 1/3 Watt
R52 - 50 ohms 1/3 Watt
C51 - .02mfd paper
C52 - .02mfd paper
C53 - .1mfd paper
C54 - .25mfd paper
C55 - .25mfd paper
C56 - 8mfd 450V electrolytic
C57 - .02mfd paper
C58 - .5mfd paper

R1 - 100,000 ohms 1/3 Watt
R2 - 50,000 ohms 1 Watt
R3 - 60,000 ohms 1/3 Watt
R4 - 70,000 ohms 1 Watt
R5 - Deleted
R6 - 1.75 meg. 1/3 Watt
R7 - 500,000 ohms 1 Watt
R8 - 1.75 meg. 1/3 Watt
R9 - 500,000 ohms 1/3 Watt
R10- 500,000 ohms Vol.Control
R11- 100,000 ohms 1 Watt
R12- 20,000 ohms 1 Watt
R13- 500,000 ohms 1/3 Watt
R14- 100,000 ohms Tone Cont.
R15- 750 ohms 1 Watt
R16- 4.5 ohms wire wound
R17- 2.3 meg. 1/3 Watt
C1 - 4mmfd mica
C2 - 2-10mmfd Air Trimmer
C3 - Tuning Condenser
C4 - .05mfd paper
C5 - .05mfd paper
C6 - 110mmfd mica (L)
C7 - 16-34mmfd Air Trimmer

C8 - Tuning Cond.
C9 - 440mmfd mica (Padder)
C10- .05mfd paper
C11- 115mmfd mica (A)
C12- 130mmfd mica (H)
C13- .1mfd paper
C14- .1mfd paper
C15- 115mmfd mica (A)
C16- 130mmfd mica (H)
C17- 110mmfd mica (L)
C18- .1mfd paper.
C19- .02mfd paper
C20- 50mmfd mica (D)
C21- 70mmfd mica (N)
C22- 110mmfd mica (L)
C23- 700mmfd mica
C24- .5mfd paper
C25- .05mfd paper
C26- .035mmfd paper
C27- .0025mmfd pap
C28- .5mfd paper
C29- 450mmfd mica
C30- 8mfd 450V elec.
C31- 450mmfd mica
C32- .02mfd paper

CONVERSION FROM "B" BATTERY TO VIBRATOR POWER UNIT OPERATION.
To convert from "B" battery operation to vibrator power unit operation, proceed as follows:- (a) Disconnect the battery cable from the chassis and remove the "A" and "B" batteries. (b) Place the vibrator power unit in the lower compartment of the cabinet, where holes are provided for mounting, and mount, using the screws supplied. (c) Connect the vibrator power unit socket to the plug on the chassis, and connect the braiding attached to the cable to the screw on the chassis marked earth.
CONVERSION FROM VIBRATOR POWER UNIT TO BATTERY OPERATION .
To convert from vibrator power unit operation to "B" battery operation proceed as follows:- (a) Disconnect the vibrator power unit cable from the chassis and disconnect and remove the accumulator. (b) Remove the vibrator power unit from the cabinet. (c) Connect the battery cable socket to the plug on the chassis, and refer to the circuit diagram for battery connections.



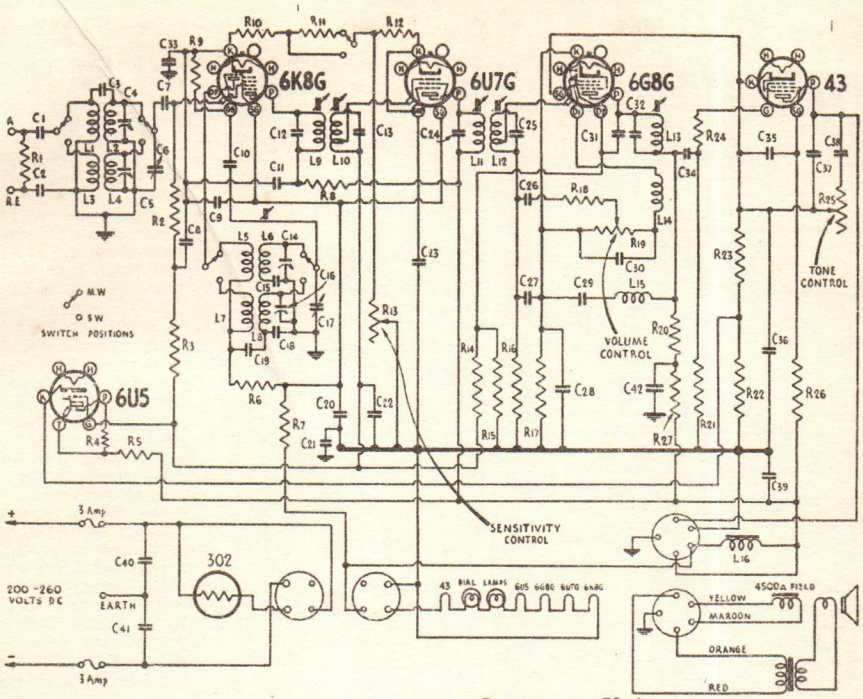
FISK RADIOLA, MODEL 176

4-Valve, Two Band, D.C. Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (b) 16-50 M. R.F. Alignment Freq. - (a) 600 K.C., 1400 K.C. 1500 K.C. (b) 18 M. Intermediate Freq. - 460 K.C. Power Consumption - 90 watts.
Loudspeaker Field Resistance - 4500 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq. Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,Det., A.V.C. and A.F. Amp. 4. 43 Output Pentode. 6U5 Visual Tuning Indicator. 302 Barretter.

R1 - 100,000 ohms 1/3 Watt
R2 - 500,000 ohms 1/3 Watt
R3 - 100,000 ohms 1/3 Watt
R4 - 1 meg. 1 Watt
R5 - 20,000 ohms 1W
R6 - 600 ohms 1/3W
R7 - 15,000 ohms 2W
R8 - 600 ohms 1/3W
R9 - 50,000 ohms 1/3 Watt
R10- 500 ohms 1/3W
R11- 200 ohms 1/3W
R12- 600 ohms 1/3W
R13- 3,000 ohms,Sens. Control
R14- 1.75meg. 1/3W
R15- 2.3 meg.1/3W
R16- 2.3 meg.1/3W
R17- 2,000 ohms 1/3 Watt
R18- 500,000 ohms 1/3 Watt
R19- 500,000 ohms Vol.Cont.
R20- 200,000 ohms 1 Watt
R21- 500,000 ohms 1/3 Watt
R22- 50 ohms 1/3W
R23- 400 ohms 3Watt
R24- 100,000 ohms 1/3W
R25- 100,000 ohms Tone Control
R26- 10,000 ohms 1W
R27- 30,000 ohms 1W
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trimmer
C5 - 2-20mmfd air trimmer
C6 - Tuning Cond.
C7 - 350mmfd mica
C8 - .05mfd paper
C9 - .1mfd paper
C10- 70mmfd mica (N)
C11- .1mfd paper
C12- 115mmfd mica (A)
C13- 130mmfd mica (H)
C14- 16-34 mmfd air Trimmer
C15- 440mmfd mica (Padder)
C16- 2-10mmfd Air trimmer
C17- Tuning Cond.
C18- 3500mmfd mica (padder)
C19- .05mfd paper
C20- 5mfd paper
C21- .5mfd paper
C22- .05mfd paper
C23- .1mfd paper
C24- 115mmfd mica (A)
C25- 130mmfd mica (H)

FISK RADIOLA, MODEL 170



C26- .01mfd paper
C27- 110mmfd mica (L)
C28- 25mfd 25V Elect.
C29- 115mmfd mica (A)
C30- 110mmfd mica (L)
C31- 50mmfd mica (D)
C32- 70mmfd mica (N)
C33- .1mfd paper
C34- .01mfd paper
C35- .5mfd paper
C36- 25mfd 25V elect.
C37- .005mmfd pap
C38- .035mfd paper
C39- 5mfd paper
C40- .1mfd paper
C41- .1mfd paper
C42- .5mfd paper

VALVE	Cathode to Neg. Volts	Screen Grid to Negative Volts	Plate to Negative Volts	Plate Current M.A.	Heater Volts
6K8G Pentode M.W.	5.5	90	225	0.6	6.3
S.W.	4.5	90	225	1.0	-
Oscillator	-	-	90	3.0	-
6U7G I.F. Amplifier	3.5	90	225	4.7	6.3
6G8G Reflex Amplifier	-	20*	85*	0.6	6.3
43 Output Pentode	20.0	150	200	35	25.0

* Cannot be measured with ordinary voltmeter.
Measured at 240 volts D.C. supply. No signal.
Controls maximum clockwise

FISK RADIOLA, MODEL 176

5-Valve, Medium Wave, A.C. Operated Superheterodyne

Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C. 1500 K.C. Intermediate Freq. - 460 K.C. Power Consumption 60 watts. Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq. Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,Det.,A.V.C. and A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 1meg. 1 Watt
R4 - 20,000 ohms 1 Watt
R5 - 50,000 ohms 1/3 Watt
R6 - 200 ohms 1/3 Watt
R7 - 3,000 ohms Sens.Cont.
R8- 20,000 ohms 1 Watt
R9 - 11,000 ohms 3 Watt
R10- 1.75meg. 1/3 Watt
R11- 2.3meg. 1/3 Watt
R12- 2.3 meg. 1/3 Watt
R13- 1meg. 1 Watt
R14- 100,000 ohms 1 Watt
R15- 500,000 ohms 1/3 Watt
R16- 500,000 ohms Vol.Control
R17- 150,000 ohms 1 Watt
R18- 20,000 ohms 1 Watt
R19- 500,000 ohms 1/3 Watt
R20- 100,000 ohms Tone Control
R21- 300,000 ohms 1/3 Watt

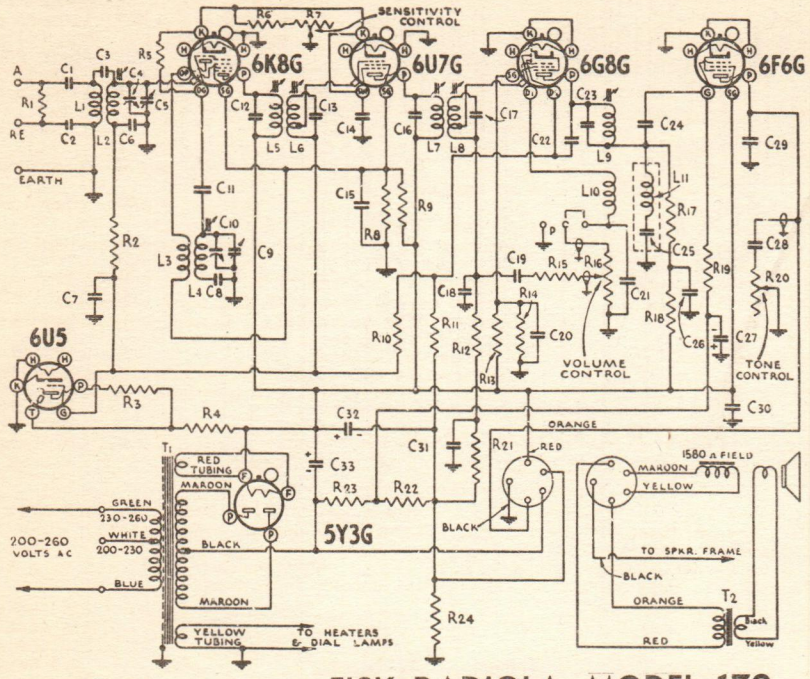
SOCKET VOLTAGES

VALVE	BIAS VOLTS	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detect.	1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amplifier	1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amplifier	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17	250	230	33	6.3

5Y3G Rectifier 720/360 volts, 65 m.a. total current 5.0

Voltage across Loudspeaker field - 100 volts
* Cannot be measured with ordinary voltmeter.
‡ Control Grid to chassis. Cannot be measured with ordinary voltmeter.
† Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input.
Volume control & sensitivity at maximum.

FISK RADIOLA, MODEL 170

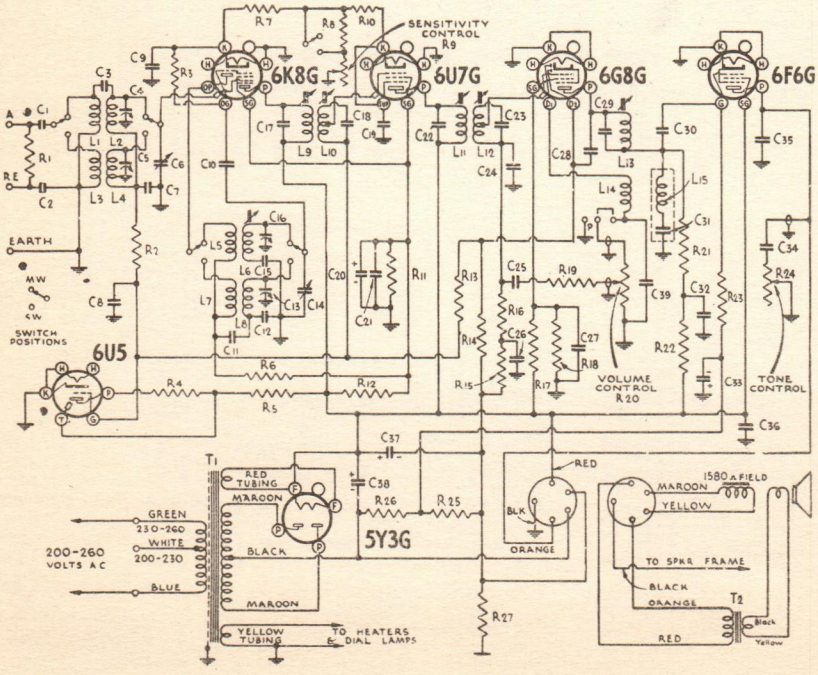


R22- 20,000 ohms 1 Watt
R23- 100,000 ohms 1 "
R24- 20 ohms 3 Watt
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trim.
C5 - Tuning Condenser
C6 - .05mfd paper
C7 - .05mfd paper
C8 - 440mmfd mica Pad.
C9 - Tuning Condenser
C10- 16-34mmfd air trim.
C11- 70mmfd mica (N)
C12- 115mmfd mica (A)
C13- 130mmfd mica (H)
C14- .1mfd paper
C15- .1mfd paper
C16- 115mmfd mica (A)
C17- 130mmfd mica (H)
C18- 110mmfd mica (L)
C19- .01mfd paper
C20- .1mfd paper
C21- 110mmfd mica (L)
C22- 50mmfd mica (D)
C23- 70mmfd mica (N)
C24- .02mfd paper
C25- 115mmfd mica (A)
C26- .5mfd paper
C27- 25mfd 25V elect.
C28- .035mfd paper
C29- .0025mfd paper
C30- .1mfd paper
C31- .1mfd paper
C32- 8mfd 500V elec.
C33- 8mfd 500V elec.

FISK RADIOLA, MODEL 172

5-Valve, Two Band, A.C. Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (B) 16-50 M. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C., 18M. Intermediate Freq. - 460 K.C. Power Consumption - 60 watts.
Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq.Converter. 2. 6U7G I.F. Amp., 3. 6G8G I.F.Amp.Det.AVC & A.F.Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.



R1 - 100,000 ohms 1/3W
R2 - 100,000 ohms " "
R3 - 50,000 ohms 1/3W
R4 - 1meg. 1 Watt
R5 - 20,000 ohms 1W
R6 - 600 ohms 1/3W
R7 - 200 ohms 1/3Watt
R8 - 100 ohms 1/3Watt
R9 - 3,000 ohms Sens. Control
R10- 200 ohms 1/3Watt
R11- 20,000 ohms 1Watt
R12- 11,000 ohms 3Watt
R13- 1.75meg.1/3 Watt
R14- 2.3 meg. 1/3 Watt
R15- 300,000 ohms 1/3W
R16- 2.3meg. 1/3 Watt
R17- 1meg. 1 Watt
R18- 100,000 ohms 1W
R19- 500,000 ohms 1/3W
R20- 500,000 ohms Vol. Control
R21- 150,000 ohms 1Wat
R22- 20,000 ohms 1Watt
R23- 500,000 ohms 1/3W
R24- 100,000 ohms Tone Control
R25- 20,000 ohms 1Watt
R26- 100,000 ohms " "
R27- 20 ohms 3 Watt
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trim
C5 - 2-20mmfd air trim
C6 - Tuning condenser
C7 - .05mfd paper
C8 - .05mfd paper
C9 - .05mfd paper

FISK RADIOLA, MODEL 172

C10- 70mmfd mica (N)
C11- .05mfd pap.
C12- 3500mmfd mica Pad.
C13- 2-10mmfd air trimmer
C14- Tuning Con.
C15- 440mmfd mica Pad.
C16- 16-34mmfd air trimmer
C17- 115mmfd mica (A)
C18- 130mmfd mica (H)
C19- .05mfd pap.
C20- 16mfd 500V elect.
C21- .1mfd pap.
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- 110mmfd mica (L)
C25- .01mfd paper
C26- .1mfd paper
C27- .1mfd paper
C28- 50mmfd mica (D)
C29- 70mmfd mica (N)
C30- .02mfd pap
C31- 115mmfd mica(A)
C32- .5mfd pap.
C33- 25mfd 25V elect.
C34- .035mfd pap.
C35- .0025mfd pap.
C36- .1mfd paper
C37- 16mfd 500V elect.
C38- 16mfd 500V elect.
C39- 110mmfd mica (L)

VALVE	BIAS VOLTS	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detect.					
M.W.	-1.2‡2.6†	100	250	1.0	6.3
S.W.	-1.2‡1.2†	100	250	0.9	-
Oscill.	-	-	100	2.5	-
6U7G I.F.Amp.					
M.W.	-1.2‡2.6†	100	250	5.0	6.3
S.W.	-1.2‡1.4†	100	250	6.0	-
6G8G Reflex Amp.	- 1.2	16*	165*	0.47	6.3
6F6G Pent.-	17.0	250	230	33.0	6.3
5Y3G Rect. 720/360 Volts, 65 m.a. total current					5.0

Voltage across loudspeaker field - 100 volts.

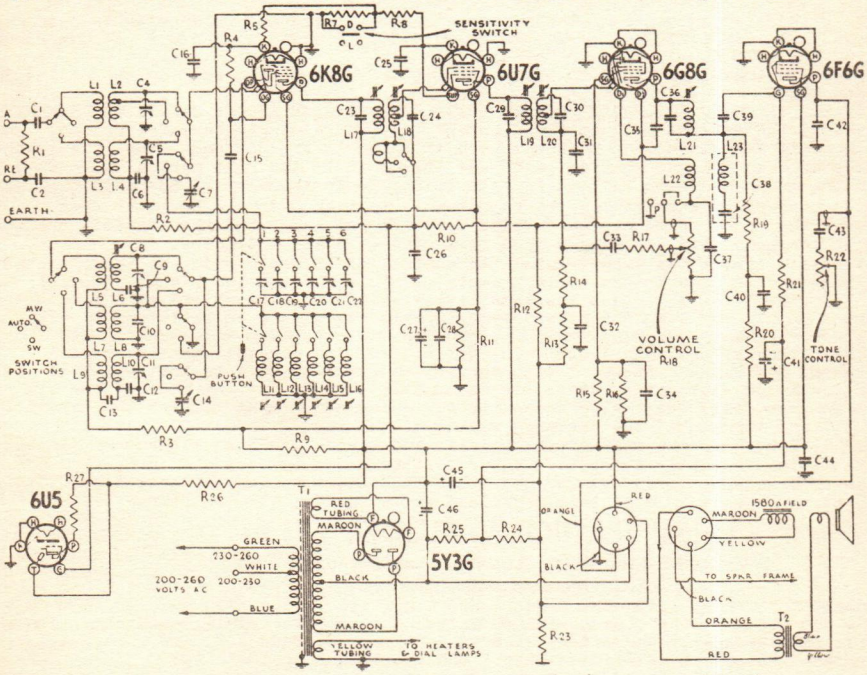
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to Chassis.
Measured at 240 volts A.C. supply. No signal input. Volume and sensitivity controls at maximum.

FISK RADIOLA, MODEL 173

5-Valve, Two Band, Automatic and Manually Tuned A.C. Operated Superheterodyne

5 Valv

Tuning Ranges - (A) 1500-550 K.C. (b) 16-50M. R.F. Alignment Freq. - (A) 600 K.C., 1400 K.C. 1500 K.C. (B) 18M. Intermediate Freq.- 460 K.C. Power Consumption - 60 Watts.
Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq.Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F.Amp.,Det, A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator



R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 600 ohms 1/3W
R4 - 50,000 ohms 1/3 Watt
R5 - 200 ohms 1/3W
R6 - Deleted
R7 - 2,000 ohms 1/3W
R8 - 200 ohms 1/3W
R9 - 11,000 ohms 3W
R10- 1.75meg.1/3W
R11- 20,000 ohms 1W
R12- 2.3meg.1/3W
R13- 300,000 ohms 1/3 Watt
R14- 2.3meg.1/3 W
R15- 1meg. 1 Watt
R16- 100,000 ohms 1W
R17- 500,000 ohms 1/3 Watt
R18- 500,000 ohms Vol. Cont.
R19- 150,000 ohms 1W
R20- 20,000 ohms 1W
R21- 500,000 ohms 1/3 Watt
R22- 100,000 ohms Tone Cont.
R23- 20 ohms 3 Watt
R24- 20,000 ohms 1W
R25- 100,000 ohms 1W
R26- 20,000 ohms 1W
R27- 1meg. 1 Watt

Circuit Modification - Receivers produced after 16/11/38 have a 100 ohms resistor inserted in the lead which previously joined the earth end of R7 to chassis.

C1 - 500mmfd mica
C2 - " " "
C3 - Deleted
C4 - 2-20mmfd air trimmer
C5 - 2-20mmfd air trimmer
C6 - .05mfd pap
C7 - Tun.Cond.
C8 - 16-34mmfd air trimmer
C9 - 440mmfd mica padder
C10- 100mmfd compensator
C11- 2-10mmfd air trimmer
C12- 3500mmfd mica padder
C13- .05mfd paper
C14- Tun.Cond.
C15- 70mmfd mica (N)
C16- .05mfd pap
C17- 30-180mmfd mica trimmer
C18- 30-180mmfd mica trimmer
C19- 65-280mmfd mica trimmer
C20- 65-280mmfd mica trimmer
C21- 120-470mmfd mica trimmer
C22- 120-470mmfd mica trimmer
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)
C25- .05mfd paper
C26- .05mfd paper
C27- 16mfd 500V elect.
C28- .1mfd paper
C29- 115mmfd mica (A)
C30- 130mmfd mica (H)
C31- 110mmfd mica (L)
C32- .1mfd paper
C33- .01mfd paper
C34- .1mfd paper
C35- 50mmfd mica (D)

FISK RADIOLA, MODEL 173

C36- 70mmfd mica (N)
C37- 110mmfd mica (L)
C38- 115mmfd mica (A)
C39- .02mfd paper
C40- .5mfd paper
C41- 25mfd 25V electrolytic
C42- .0025mfd paper
C43- .035mfd paper
C44- .1mfd paper
C45- 16mfd 500V elect.
C46- 16mfd 500V electrolytic

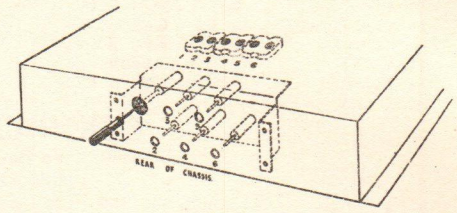
VALVE	BIAS VOLTS	SCREEN GRID TO CHASSIS VOLTS	PLATE TO CHASSIS VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6K8G Detector	-1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amp.	-1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amp.	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17.0	250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 m.a. total current.				5.0

Voltage across loudspeaker field, 100 volts.
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control at maximum and sensitivity switch at Distant (D).

ADJUSTMENTS FOR AUTOMATIC TUNING.
Any six stations in the "Standard Medium Wave" Broadcasting Band may be selected for "Automatic" tuning. The range of frequencies covered by each button from right to left,is as follows,and only stations with the given range can be obtained.

1. 850 .. 1500 K.C.
2. 850 .. 1500 K.C.
3. 700 .. 1300 K.C.
4. 700 .. 1300 K.C.
5. 550 .. 1100 K.C.
6. 550 .. 1100 K.C.

A sheet on which are printed the call-signs of all Australasian broadcasting stations accompanies the Receiver. Call-signs of the six stations selected should be removed from the sheet.
Remove the escutcheon plate beneath the dial, by removing the three screws,and take out the celluloid window.



Automatic Tuning Adjustments.

The stations should be adjusted in order of their frequency in kilocycles. This order is used in the following example: - 1. 2SM (1270 K.C.) 2. 2CH (1190 K.C.) 3. 2UW (1110 K.C.) 4. 2GB (870KC) 5. 2BL (740 K.C.) 6. 2FC (610 K.C.).
Place the six selected stations call-signs in their respective sections and replace the celluloid window and escutcheon plate.
TURN THE RECEIVER ON AND ALLOW IT TO OPERATE FOR AT LEAST FIVE MINUTES BEFORE MAKING ADJUSTMENTS.
Attached to the inside of the cabinet will be found an envelope containing a screwdriver and guide. On the rear of the chassis are six holes, number 1 to 6,as shown in the diagram. They give access to the adjusting screws. Take the screwdriver guide and insert it in the hole marked "1." Pass the screwdriver through the guide and turn till it is felt to engage in the slot of the adjusting screw. It will be found most convenient when making the adjustments to lean over the Receiver from the rear. In this attitude the adjustments may be carried out with one hand, and the controls operated with the other,and at the same time allowing a good view of the Tuning indicator.
Then proceed as follows:- (1.)Set the Manual-Automatic control at "Manual" and tune the station selected for No. 1 push-button (2SM in the above example). (2.) Switch the Manual-Automatic control to "Automatic". It is advisable to set the Sensitivity switch to Distant (D) at the same time. (3) Press push-button No. 1.(4) Turn the screwdriver, previously placed in position, slowly, until station No.1 is heard (2SM in example). Watch the Tuning Indicator and adjust until its darkened sector is at the narrowest possible width. (5) While searching for the station, switch the Manual-Automatic control to "Manual" frequently to verify that station No.1 is that which is being tuned. (6) Switch the Manual-Automatic control to "Automatic". On top of the chassis are six more holes numbered 1 to 6 - see diag. These give access to six screw adjustment. Insert the screwdriver in the hole marked "1" and turn until the darkened sector of the Tuning Indicator is at its narrowest possible width. 7. Return to the rear of the chassis and make a final adjustment of adjusting screw No.1 until the Tuning Indicator shows most accurate tuning.
Now proceed in order of frequency to adjust for the other five stations making the set-up 2,3,4, 5, and 6, in sequence, by the same method as that described above for No. 1.

FISK RADIOLA, MODEL 171

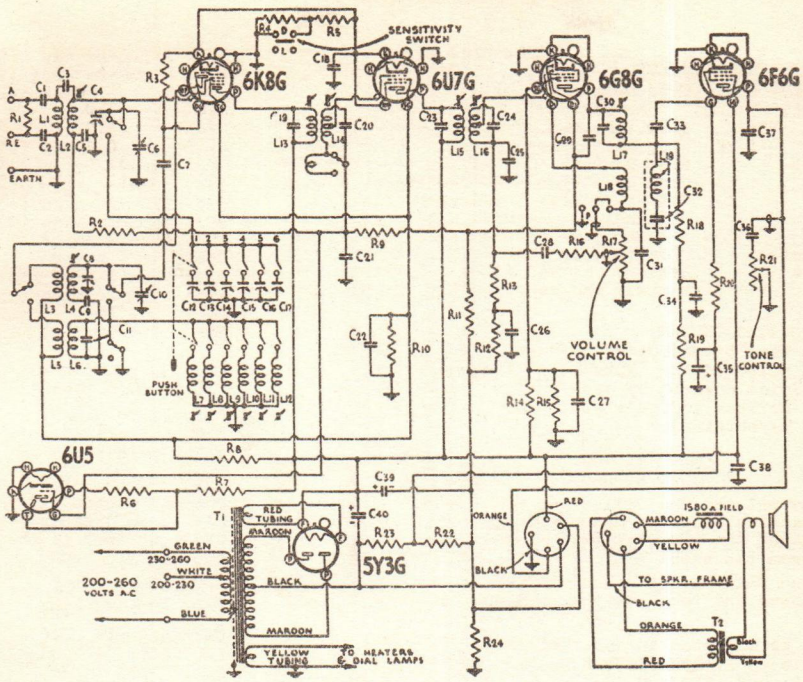
5-Valve, Medium Wave, Automatic and Manually Tuned A.C. Operated Superheterodyne

5 odyne

Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C.
Intermediate Freq. - 460 K.C. Power Consumption 60 Watts. Loudspeaker Field Resistance 1580 ohm.
VALVE COMPLEMENT - 1, 6K8G Frequency Converter. 2, 6U7G I.F. Amp. 3, 6G8G I.F. Amp.,Det., A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 50,000 ohms 1/3 Watt
R4 - 2,000 ohms 1/3 Watt
R5 - 200 ohms 1/3W
R6 - 1meg. 1 Watt
R7 - 20,000 ohms 1W
R8 - 11,000 ohms 3W
R9 - 1¼ meg. 1/3W
R10- 20,000 ohms 1W
R11- 2.3 meg. 1/3W
R12- 300,000 ohms 1/3 Watt
R13- 2.3 meg.1/3W
R14- 1meg. 1 Watt
R15- 100,000 ohms 1 Watt
R16- 500,000 ohms 1/3 Watt
R17- 500,000 ohms Vol.Cont.
R18- 150,000 ohms 1 Watt
R19- 20,000 ohms 1 Watt
R20- 500,000 ohms 1/3 Watt
R21- 100,000 ohms Tone Cont.
R22- 20,000 ohms 1 Watt
R23- 100,000 ohms 1 Watt
R24- 20 ohms 3W
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trimmer
C5 - .05mfd pap
C6 - Tuning Con.
C7 - 70mmfd mica (N)
C8 - 16-34mmfd air trimmer
C9 - 440mmfd mica (Padder)
C10- Tuning Cond.
C11- 100mmfd compensator
C12- 30-180mmfd mica trimmer
C13- 30-180mmfd mica trimmer
C14- 65-280mmfd mica trimmer
C15- 65-280mmfd mica trimmer
C16- 120-470mmfd mica trimmer
C17- 120-470mmfd mica trimmer
C18- .1mfd paper
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- .1mfd paper
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)

FISK RADIOLA, MODEL 171



C25- 110mmfd mica (L)
C26- .1mfd paper
C27- .1mfd paper
C28- .01mfd paper
C29- 50mmfd mica (D)
C30- 70mmfd mica (N)
C31- 110mmfd mica (L)
C32- 115mmfd mica (A)
C33- .02mfd paper
C34- .5mfd paper
C35- 25mfd 25V elect.
C36- .035mfd paper
C37- .0025mfd paper
C38- .1mfd paper
C39- 8mfd 500V elect.
C40- 8mfd 500V elect.

VALVE	BIAS VOLTS	SCREEN GRID TO CHASSIS VOLTS	PLATE TO CHASSIS VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6K8G Detector	-1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amplifier	-1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amplifier	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17.0	250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 m.a. total current .				5.0

Voltage across Loudspeaker field, 100 volts.
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control at maximum and sensitivity switch at Distant (D).

NOTE: For Adjustments for Automatic Tuning - see Hotpoint Bandmaster A459DE.

FISK RADIOLA, MODEL 175

5-Valve, Two Band, Battery Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (b) 16-50M. R.F. Alignment Frequencies (a) 600 K.C., 1400 K.C. 1500 K.C. (b) 18M. Intermediate Freq.- 460 K.C.

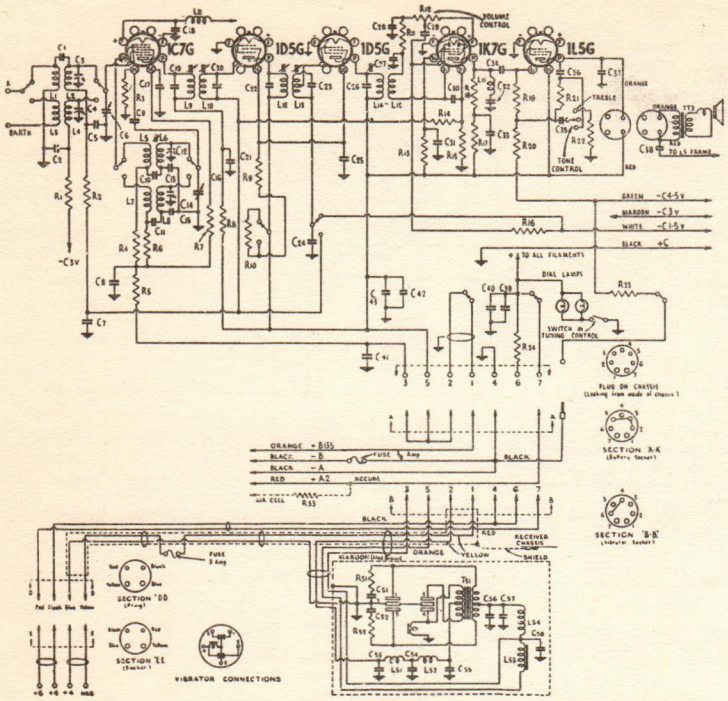
Current Consumption	"B" Battery Operation	Vibrator Operation
"A" Battery at 2 volts	0.60 amps.	
"A" Battery at 6 volts		1.2 amps.
"B" Battery at 135 volts	14-17 M.A.	(Supplied from vibrator Power Unit)

VALVE COMPLEMENT - 1. 1Q7G Detector-Oscillator. 2. 1D5G I.F. Amplifier. 3. 1D5G I.F. Amp. 4. 1K7G Det.,A.V.C. & A.F. Amp. 5. 1L5G Output Pentode.
NOTE: The plate supply may be from dry "B" batteries or from a Vibrator Power Unit. Instructions for changing from one to the other will be found at the end of Model 449MB.

Vibrator Power Unit
R51- 50 ohms 1/3W
R52- 50 ohms 1/3W
C51- .02mfd paper
C52- .02mfd paper
C53- .1mfd paper
C54- .25mfd paper
C55- .25mfd paper
C56- 8mfd 450V elec
C57- .02mfd paper
C58- .5mfd paper

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 50,000 ohms 1/3 Watt
R4 - 40,000 ohms 1 Watt
R5 - 5,000 ohms 1W
R6 - 400 ohms 1/3W
R7 - 40,000 ohms 1 Watt
R8 - 300 ohms 1/3W
R9 - 100,000 ohms 1 Watt
R10- 150,000 ohms 1 Watt
R11- 100,000 ohms 1/3 Watt
R12- 500,000 ohms Vol.Control
R13- 1meg. 1 Watt
R14- 1.75meg.1/3W
R15- 2.3meg.1/3W
R16- 1.75meg.1/3W
R17- 50,000 ohms 1 Watt
R18- 200,000 ohms 1 Watt
R19- 390,000 ohms 1/3 Watt
R20- 100,000 ohms 1/3 Watt
R21- 200,000 ohms 1/3 Watt
R22- 15,000 ohms 1/3 Watt
R23- 600 ohms 1W
R24- 4.5 ohms w/w
C1 - 4mmfd mica
C2 - .05mfd paper
C3 - 2-20mmfd air trimmer
C4 - 2-20mmfd air trimmer
C5 - .05mfd paper
C6 - Tuning Cond.
C7 - .02mfd paper
C8 - 8mfd 450V elect.
C9 - 110mmfd mica (L)
C10- .05mfd paper
C11- .05mfd paper
C12- 16-34mmfd air trimmer
C13- 440mmfd mica (Padder)

FISK RADIOLA, MODEL 175



C14- 2-10mmfd air trimmer
C15- 350Ommfd mica (Pad)
C16- Tuning Condenser
C17- .1mfd paper
C18- .1mfd "
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- .02mfd paper
C25- .1mfd paper
C26- 70mmfd mica (N)
C27- 110mmfd mica (L)
C28- 110mmfd mica (L)
C29- .01mfd paper
C30- 50mmfd mica (D)
C31- .1mfd paper
C32- 115mmfd mica (A)
C33- .5mfd paper
C34- .05mfd paper
C35- 2000 mmfd mica
C36- .05mfd paper
C37- .0025mfd paper
C38- .02mfd paper
C39- .5mfd paper
C40- 450mmfd mica
C41- 450mmfd mica
C42- 8mfd 450V electro.
C43- .1mfd paper

VALVE	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	FILAMENT VOLTS
1C7G Detector M.W.	0	48	135	1.5	2.0
S.W.	-3.0*	48	135	0.7	-
Oscillator M.W.	-	-	60	1.5	-
S.W.	-	-	100	3.0	-
1D5G I.F. Amplifier	0	30	135	0.75	2.0
1D5G I.F. Amplifier M.W.	-1.5*	30	135	0.36	2.0
S.W.	0	30	135	0.75	-
1K7G Reflex Amplifier	-1.5*	55*	75*	0.22	2.0
1L5G Pentode	-4.5*	135	130	7.0	2.0

*Cannot be measured with ordinary voltmeter.
Measured with no signal input and Volume Control at maximum clockwise.

FISK RADIOLA 49G AND 49GV

4-Valve, Medium Wave, Battery Operated Superheterodyne

Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C.,
Intermediate Frequency - 460 K.C.

Current Consumption.	"B" Battery Operation	Vibrator Operation
"A" Battery at 2 volts	0.54 amps.	
"A" Battery at 6 volts		1.2 amps.
"B" Battery at 135 volts	14 M.A.	(Supplied from Vibrator Power Unit)

VALVE COMPLEMENT - 1. 1C7G Detect.-Osc. 2. 1D5G I.F. Amp. 3. 1K7G I.F. Amp. Det., A.V.C. and A.F. Amp. 4. 1L5G Output Pentode.
NOTE: The plate supply may be from dry "B" batteries or from a Vibrator Power Unit. Instructions for changing from one to the other are given further on.

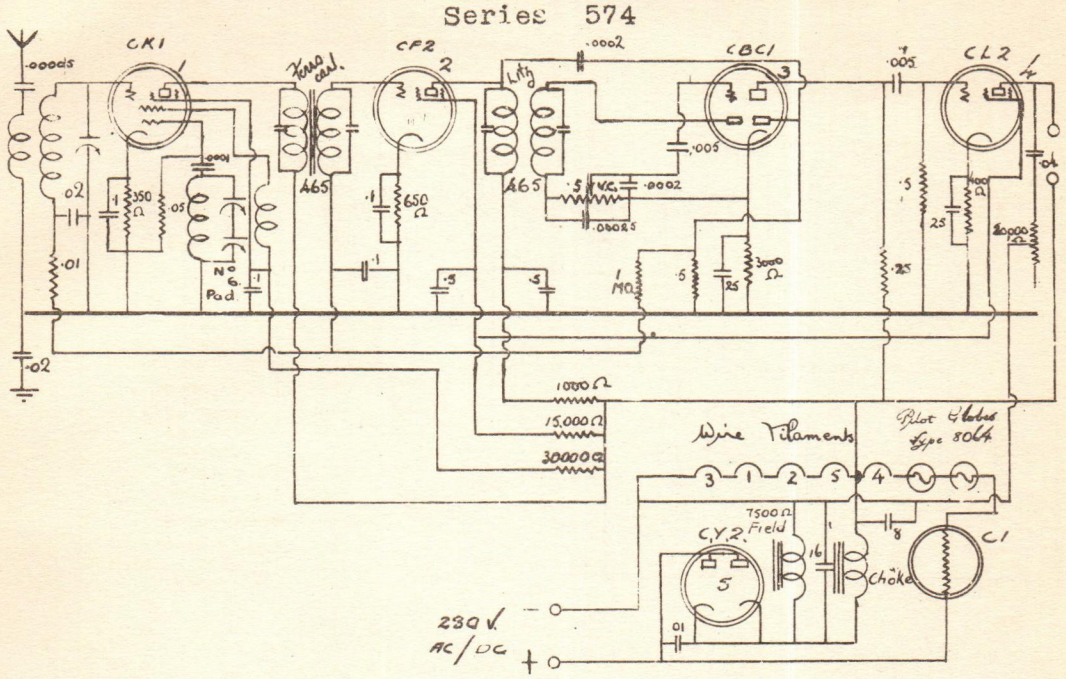
VALVE	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G Detector	0	35	135	1.0	2.0
Oscillator	-	-	60	1.5	-
1D5G I.F. Amp.	0	35	135	1.5	2.0
1K7G Reflex Amp.	-1.5*	60*	85*	0.4	2.0
1L5G Pentode	-4.5*	135	130	6.5	2.0

*Cannot be measured with ordinary voltmeter.
Measured with Volume Control at maximum. No signal.

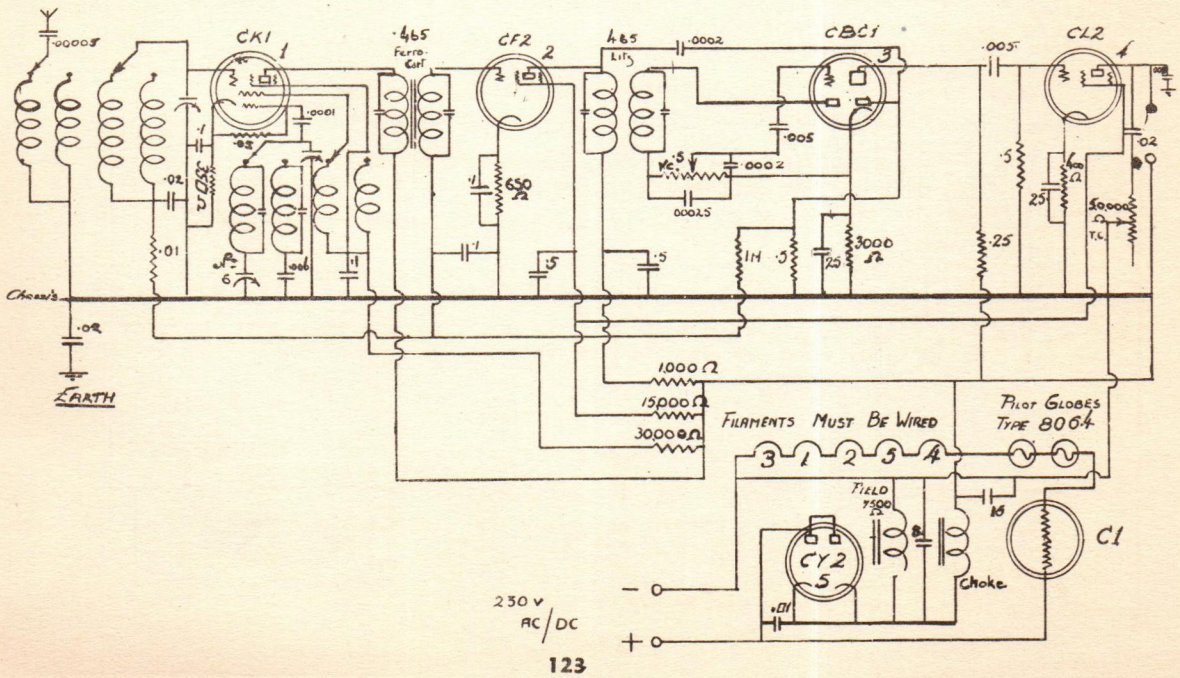
ECLIPSE RADIO

Manufactured by Eclipse Radio Pty. Ltd., 11 Sturt Street, South Melbourne, S.C.4

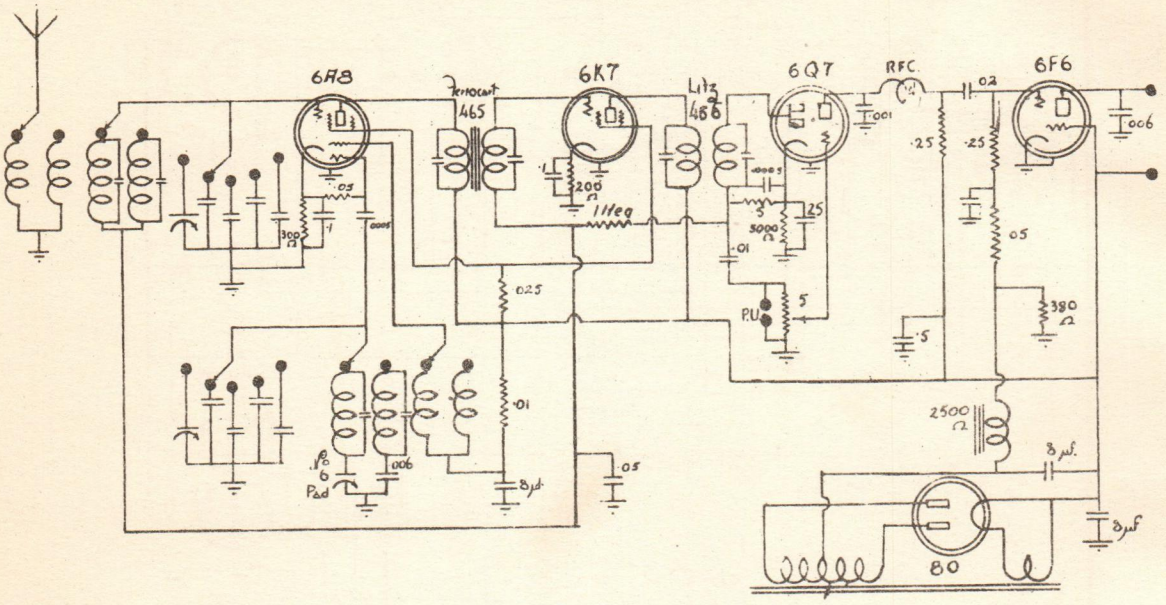
ECLIPSE; PETER PAN, CROYDEN
Five Valve A.C. / D.C.
Series 574



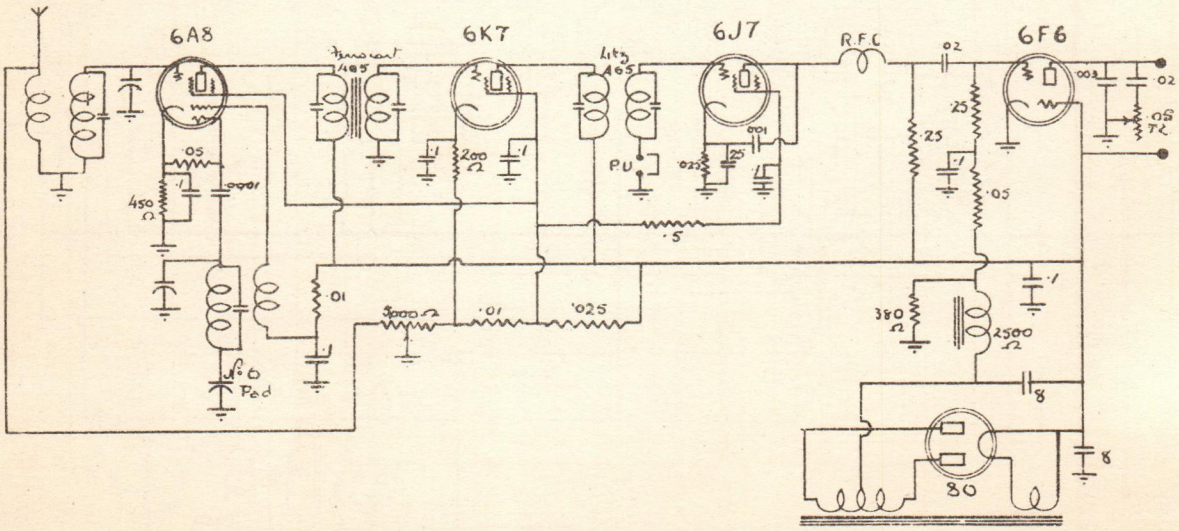
ECLIPSE, PETER PAN, CROYDEN
Five Valve D.W. A.C. / D.C.
Series 576



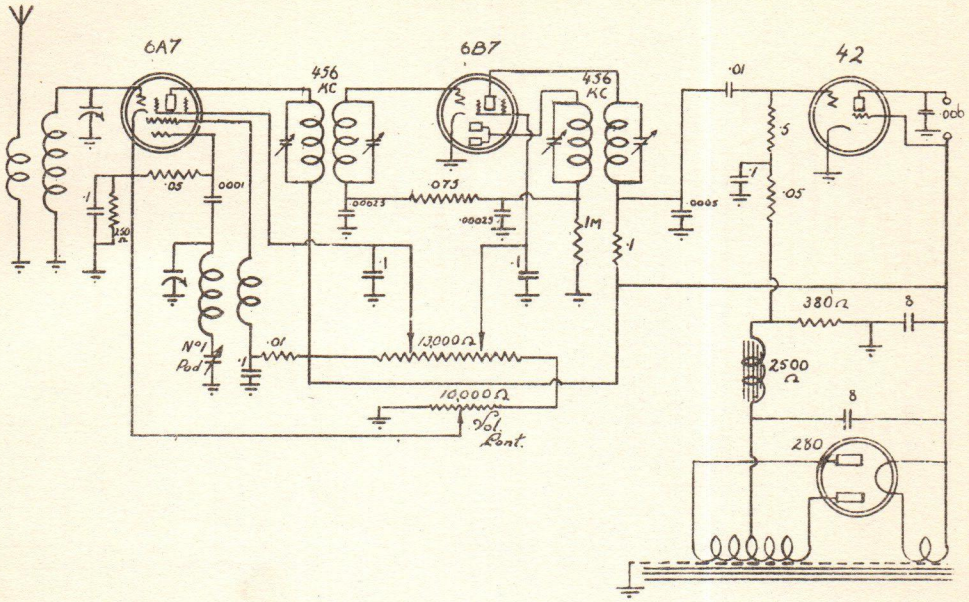
ECLIPSE, PETER PAN, CROYDEN
Five Valve D.W. A.C.
Series 571



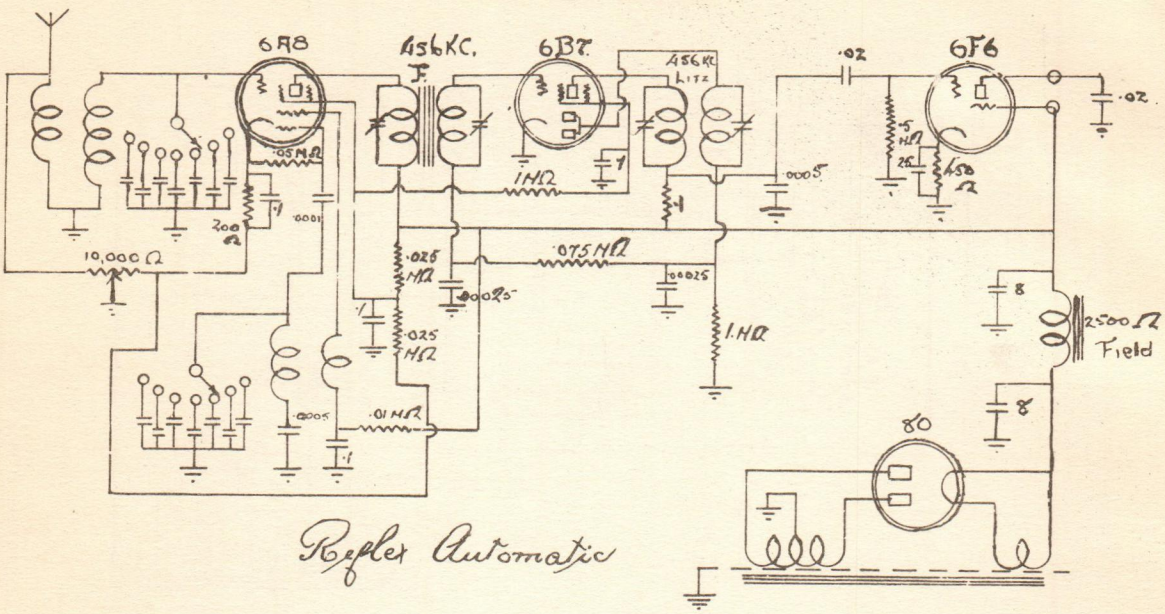
ECLIPSE, PETER PAN, CROYDEN
Five Valve Broadcast A.C.
Series 572



ECLIPSE, PETER PAN, CROYDEN
Four Valve Broadcast A.C.
Series 411

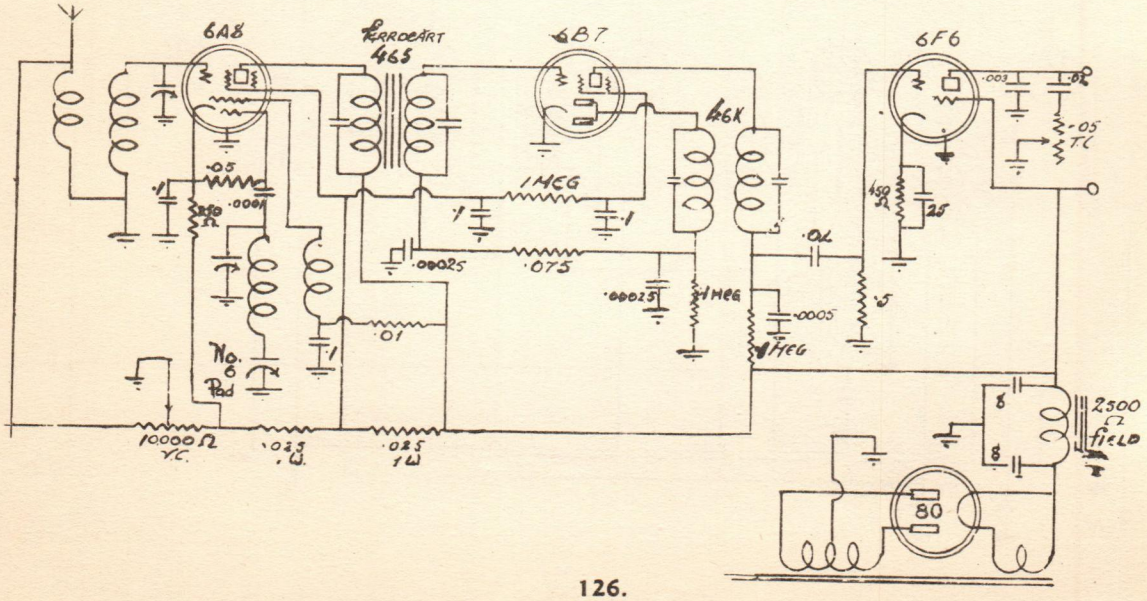

6A7
456 KC
6B7
456 KC
42
·01
·05
·0001
·00023
·073
·00023
1M
·1
·0005
·5
·1
·05
·006
380Ω
8
2500 Ω
8
280
·01
13,000Ω
10,000Ω
Vol Cont.
N°1 Pad
·1
·1
·1

ECLIPSE, PETER PAN, CROYDEN
Four Valve Reflex Auto Tuning A.C.
Series 412



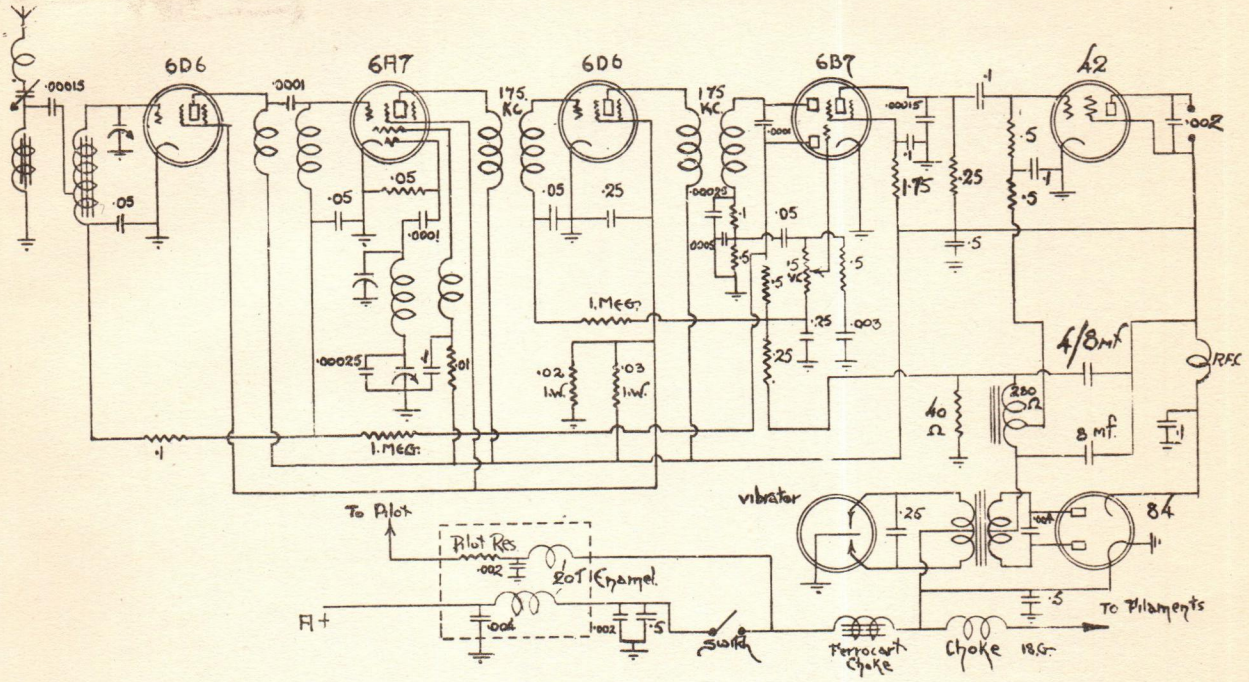
Reflex Automatic

ECLIPSE, PETER PAN, CROYDEN
Four Valve Broadcast A.C.
Series 413



ECLIPSE, PETER PAN, CROYDEN

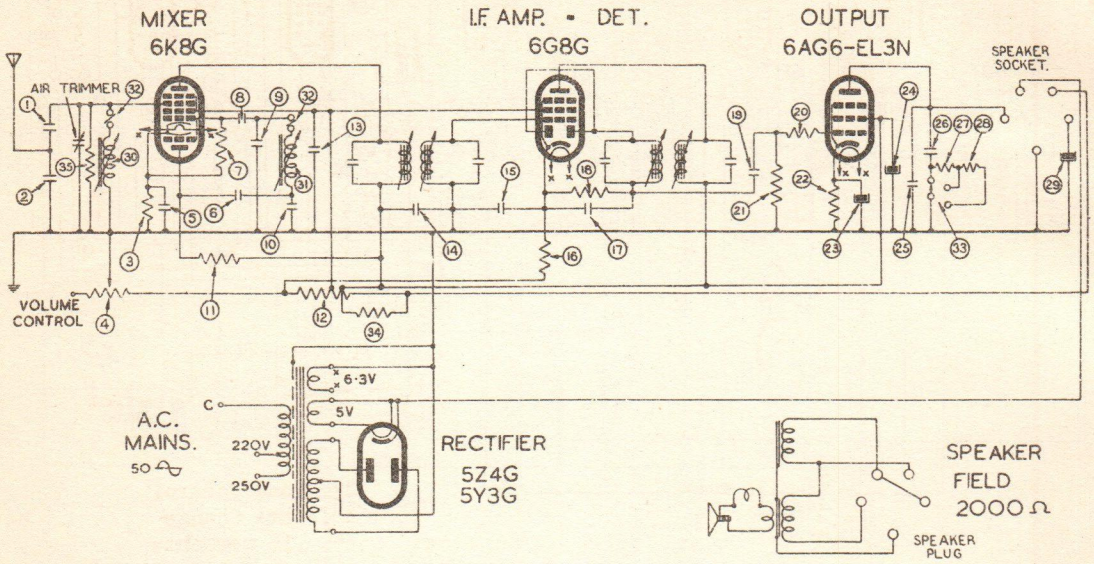
Series 610/618



GENALEX RADIO

GENALEX 600

A.C. Operated Superheterodyne—Automatic Tuning—Broadcast



INTERMEDIATE FREQUENCY 458KC

1. 130mmfd
2. .001mmfd
3. 180 ohms
4. 5000 ohms
5. .1mfd
6. .001mfd
7. 50,000 ohms
8. 50mmfd
9. .0005mfd
10. 250mmfd
11. 100,000 ohms
12. 15,000 ohms P.D.
13. .1mfd
14. .5mfd
15. .1mfd
16. 350 ohms
17. .00025mfd
18. .5 meg.
19. .01mfd
20. .1 meg
21. 1 meg ohms
22. 120 ohms
23. 50mfd
24. 16 mfd
25. .0005mfd.
26. .05mfd
27. 5000 ohms
28. 50000 ohms
29. 8mfd
30. Aerial Coil
31. Oscillator Coil
32. Push Button Switch
33. Tone Control
34. 5000 ohms
35. 2 meg ohms

NOTE: For simplicity only one tuned circuit and switch are shown in schematic diagram. There are actually eight aerial coils, oscillator coils, and switch sections in the receiver proper.

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6.0	150.	3.0	75.0	7.0	2.0	30.0	1.0
6G8G	Intermediate Freq.Amp.Det.	6.0	150	2.5	75.0	.8	1.0	-	-
6AG6	Power Output	6.0	200.	25	150.0	6.0	4.0	-	-
5Z4G	Full-Wave Rectifier	5.0	300/300	25/25	-	-	-	-	-

Speaker Field Resistance - 2,000 ohms. Above readings with 240 A.C. input, volume control on, and one press button pushed in.

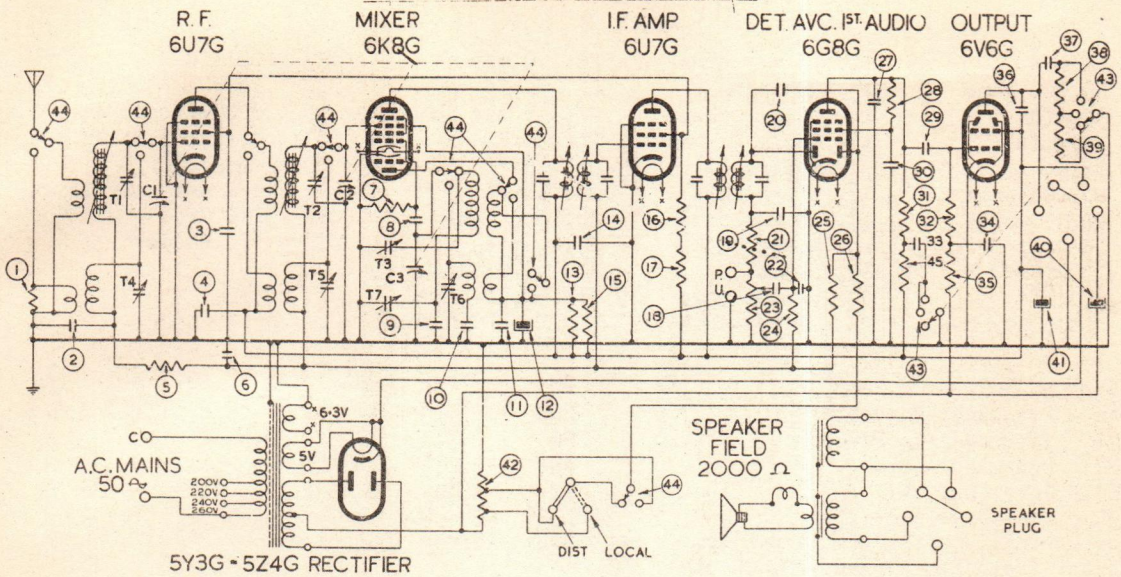
GENALEX 625

A.C. Operated Superheterodyne—Manual Tuning—Dual Wave

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6U7G	Radio Frequency Amplifier	6	250	8	100	2	2.8	-	-
6K8G	Frequency Converter	6	250	3	100	6	2.8	100	3.5
6U7G	Intermediate Freq. Amp.	6	250	8	100	2	2.8	-	-
6G8G	Det. A.V.C. Audio	6	110	.6	30	.1	2.8	-	-
6V6G	Power Output	6	245	30	250	1.5	17	-	-
5Z4G	Full-Wave Rectifier	5	360/360	35/35	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V. A.C. input- no signal. Volume Control full on.

GENALEX 625 (Contd.)

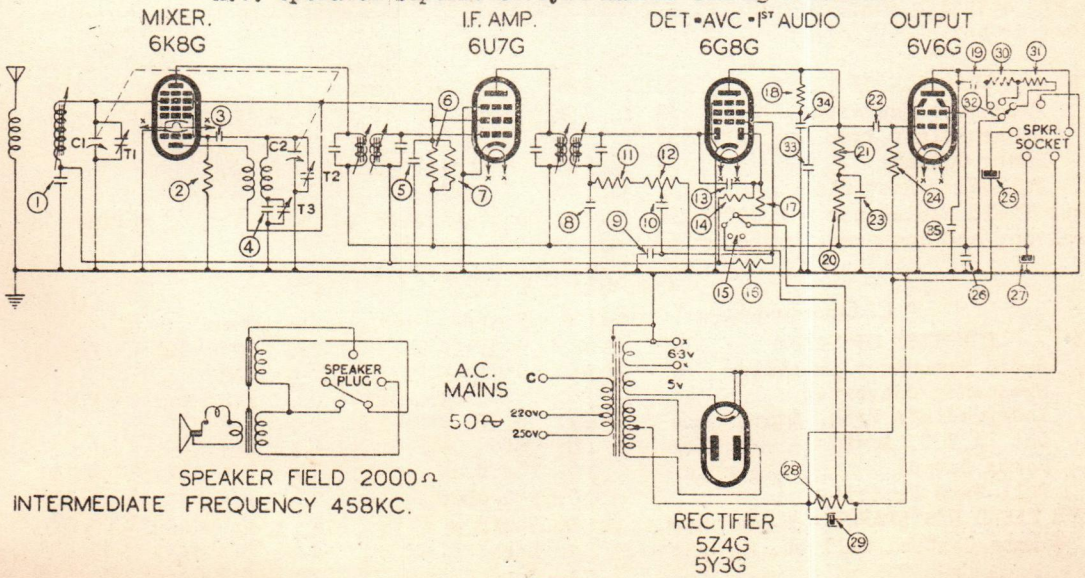


1. 500 ohms
2. .05mfd
3. .1mfd
4. .01mfd
5. .1meg ohms
6. .05mfd
7. 50,000 ohms
8. 50mmfd
9. 420mmfd
10. .006mfd
11. .1mfd
12. 8mfd
13. 30,000 ohms
14. 5mfd
15. 30,000 ohms
16. 20,000 ohms
17. 20,000 ohms
18. .01mfd
19. .00025mfd
20. .0001mfd
21. .1 meg ohms
22. .00025mfd
23. 5 meg ohms
24. 1 meg ohms
25. .5 meg ohms
26. .5 meg ohms
27. .0001mfd
28. 1 meg ohms
29. .01mfd
30. .1mfd
31. 50,000 ohms
32. .5 meg ohms
33. .01mfd
34. .1mfd
35. 50,000 ohms
36. .004mfd
37. .05mfd
38. 10,000 ohms
39. 50,000 ohms
40. 8mfd
41. 16mfd
42. 250 ohms
43. Tone Control
44. Wave Change
45. .15 meg ohms

C1 - Aerial Section Gang
C2 - R.F. " "
C3 - Osc. " "
T1 - B/C Aer. Air Trimmer
T2 - B/C R.F. " "
T3 - B/C Osc. " "
T4 - S/W Aerial " "
T5 - S/W R.F. " "
T6 - S/W Osc.
T7 - [illegible] Padder

GENALEX BC 605C

A.C. Operated Superheterodyne Manual Tuning-Broadcast



SPEAKER FIELD 2000 Ω

INTERMEDIATE FREQUENCY 458KC.

GENALEX BC 605C (Contd.)

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. 1mfd
6. 20,000 ohms
7. 20,000 ohms
8. .00025mfd
9. .00025mfd
10. .01mfd
11. 100,000 ohms
12. .5 meg ohms
13. 0001mfd
14. .5 meg ohms
15. Local Distance Switch
16. 1 meg ohms
17. .5 meg ohms
18. 1 meg ohm
19. .05mfd
20. .1 meg ohms
21. .1 meg ohms
22. .01mfd
23. 5 mfd
24. .5 meg ohms
25. 8mfd
26. .5mfd
27. 16mfd
28. 250 ohms
29. 25mfd
30. 5000 ohms
31. 50,000 ohms
32. Tone Control
33. 0001mfd
34. .1mfd
35. .0005mfd 605 only

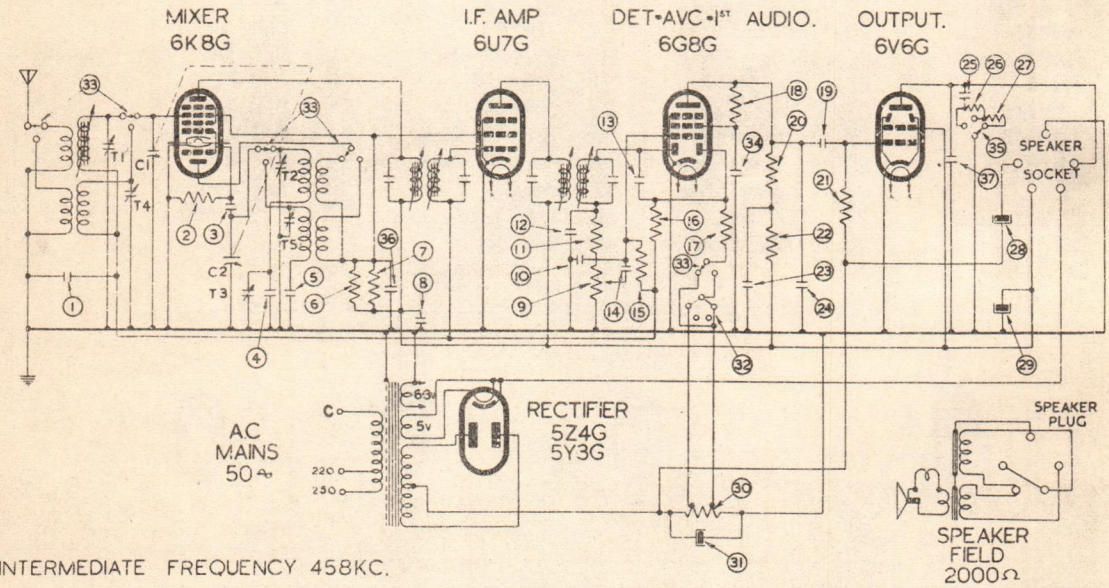
C1 - Aerial Section Gang
C2 - Osc. " "
T1 - B/C Aer. Air Trimm.
T2 - B/C Osc. " "
T3 - B/C Padder" "

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Above readings with 240V. A.C. input - no signal. Volume control on.
Speaker Field Resistance - 2,000 ohms.

GENALEX BC 610C

A.C. Operated Superheterodyne—Manual Tuning—Dual Wave



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. .006mfd
6. 20,000 ohms
7. 20,000 ohms
8. .5mfd
9. .5 meg ohms
10. .00025mfd
11. .1meg ohms
12. .00025mfd
13. .0001mfd
14. .01mfd
15. 1 meg ohms
16. .5 meg ohms
17. .5 meg ohms
18. 1 meg ohms
19. .01mfd
20. .1 meg ohms
21. .5 meg ohms
22. .1 meg ohms
23. .5 mfd
24. .0001mfd
25. .05mfd
26. 5000 ohms
27. 50,000 ohms
28. 8mfd
29. 16mfd
30. 250 ohms
31. 25mfd
32. Local Dist.
33. Wave Change SW.
34. 1mfd
35. Tone Control
36. .1mfd
37. .0005mfd 610 only

C1 - Aer. Section Gang
C2 - Osc. " "
T1 - B/C Aer.Air Trimm.
T2 - B/C Osc. " "
T3 - B/C Padder " "
T4 - S/W Aer. " "
T5 - S/W Osc. " "

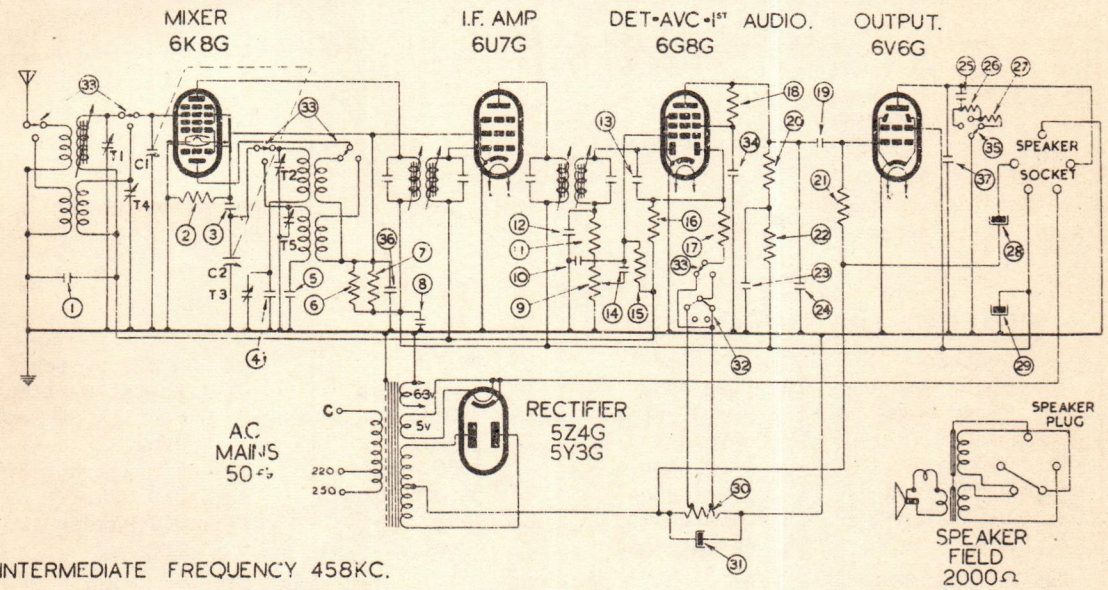
GENALEX BC 610C (Contd.)

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Above readings with 240V. A.C. input - no signal. Volume control on.
Speaker Field Resistance - 2,000 ohms.

GENALEX BC610

A.C. Operated Superheterodyne Manual Tuning-Dual-Wave



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. .006mfd
6. 20,000 ohms
7. 20,000 ohms
8. .5mfd
9. .5meg ohms
10. .00025mfd
11. .1 meg ohms
12. .00025mfd
13. .0001mfd
14. .01mfd
15. 1 meg ohms
16. .5 meg ohms
17. .5 meg ohms
18. 1 meg ohms
19. .01mfd
20. .1 meg ohms
21. .5 meg ohms
22. .1 meg ohms
23. .5mfd
24. .0001mfd
25. .05mfd
26. 5000 ohms
27. 50,000 ohms
28. 8mfd
29. 16mfd
30. 250 ohms
31. 25mfd
32. Local Dist.
33. Wave Change SW.
34. 1mfd
35. Tone Control
36. .1mfd
37. .0005mfd 610 only

C1 - Aer.Section Garg
C2 - Osc. " "
T1 - B/C Aer.Air Trim
T2 - B/C Osc. " "
T3 - B/C Padder " "
T4 - S/W Aer. " "
T5 - S/W Osc. " "

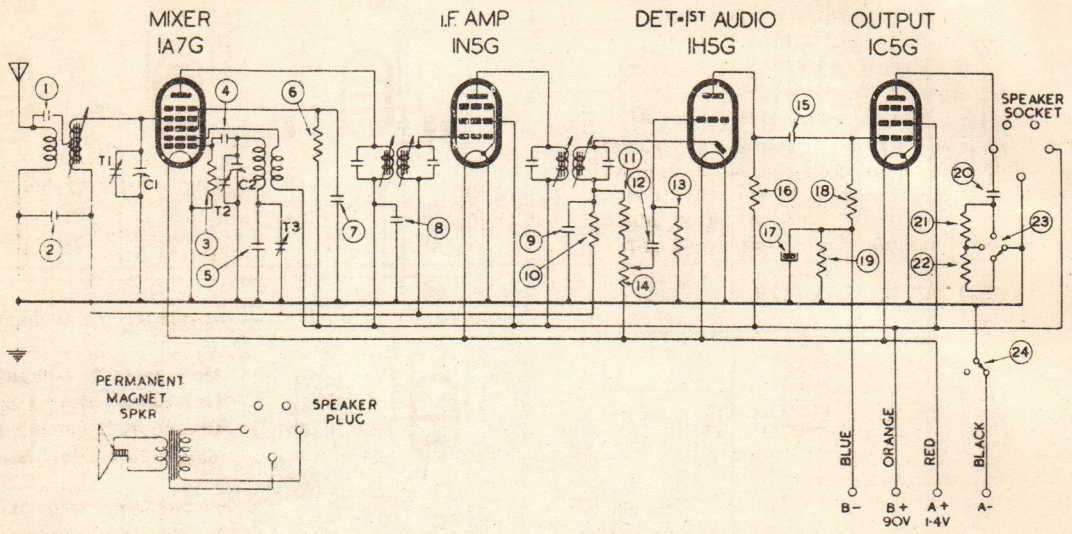
VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Speaker Field Resistance - 2,000 ohms

Above readings with 240V. A.C. input - no signal.
Volume control on.

GENALEX BC675C

Battery-Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

1. .0005mfd
2. .05mfd
3. .25meg ohms
4. 50mmfd
5. 390mmfd
6. 50,000 ohms
7. .1mfd
8. 5mfd
9. .00025mfd
10. 1meg ohms
11. 50,000 ohms
12. .01mfd
13. 1meg ohms
14. 5 meg ohms
15. .01mfd
16. 25 meg ohms
17. 25mfd
18. 5 meg ohms
19. 750 ohms
20. .05mfd
21. 5000 ohms
22. 50,000 ohms
23. Tone Control
24. On-Off Switch

C1 - Aerial Section Gang
C2 - Oscillator Section Gang
T1 - B/C Aer.Air Trimmer
T2 - B/C Osc. " "
T3 - B/C Padder Air Trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
1A7G	Frequency Converter	1.4	83	.4	40	.3	-	83.0	1.0
1N5G	Intermediate Freq.Amp.	1.4	83.0	1.0	83	.3	-	-	-
1H5G	Det., AVC Audio	1.4	60.0	.04	-	-	-	-	-
1C5G	Power Output	1.4	80.0	5.0	83	1.2	7.0	-	-

SPEAKER - Permagnetic. NOTE:- Above shows voltage and current readings with H.T. 90 volts from "B" Batteries.

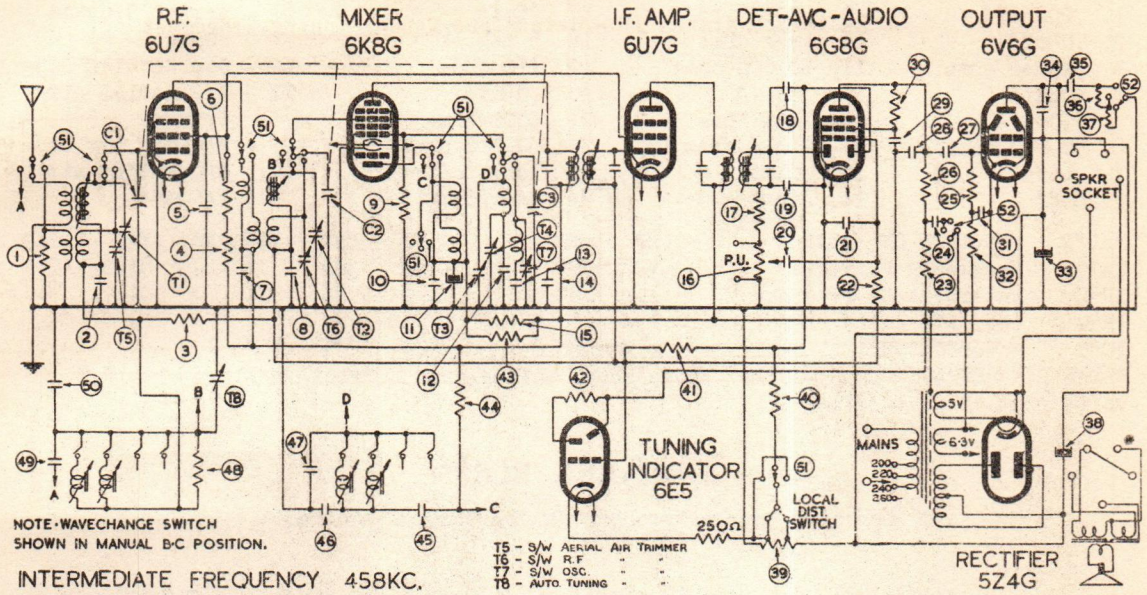
GENALEX BC630

A.C. Operated Superheterodyne Manual-Automatic Tuning-Dual Wave

1. 500 ohms
2. .05mfd
3. .1meg ohms
4. 20,000 ohms
5. .1mfd
6. 20,000 ohms
7. .01mfd
8. .05mfd
9. 50,000 ohms
10. .1mfd
11. 8mfd
12. 420mmfd
13. .006mfd
14. .5mfd
15. 30,000 ohms
16. .5meg ohms Pot
17. .1meg ohms
18. .0001mfd
19. .00025mfd
20. .01mfd
21. .00025mfd
22. 1meg ohms
23. 50,000 ohms
24. .01mfd
25. .5meg ohms
26. .15 meg ohms
27. .01mfd
28 .0001mfd
29. .1mfd
30. 1meg ohms
31. .1mfd
32. 50,000 ohms
33. 16mfd
34. .004mfd
35. .05mfd
36. 10,000 ohms
37. 50,000 ohms
38. 8mfd
39. 250 ohms
40. .5meg ohms
41. .5meg ohms
42. 1meg ohms
43. 30,000 ohms
44. .1meg ohms
45. .001mfd
46. .00025mfd
47. .0005mfd
48. 2 meg ohms
49. 130mmfd
50. .001mfd
51. Wave Change
52. Tone Control

C1 - Aer.Section Gang
C2 - R.F. " "
C3 - Osc. " "
T1 - B/C Aer.Air Trimm.
T2 - B/C R.F. " "
T3 - B/C Osc. " "
T4 - B/C Padder " "

GENALEX BC630 (Contd.)



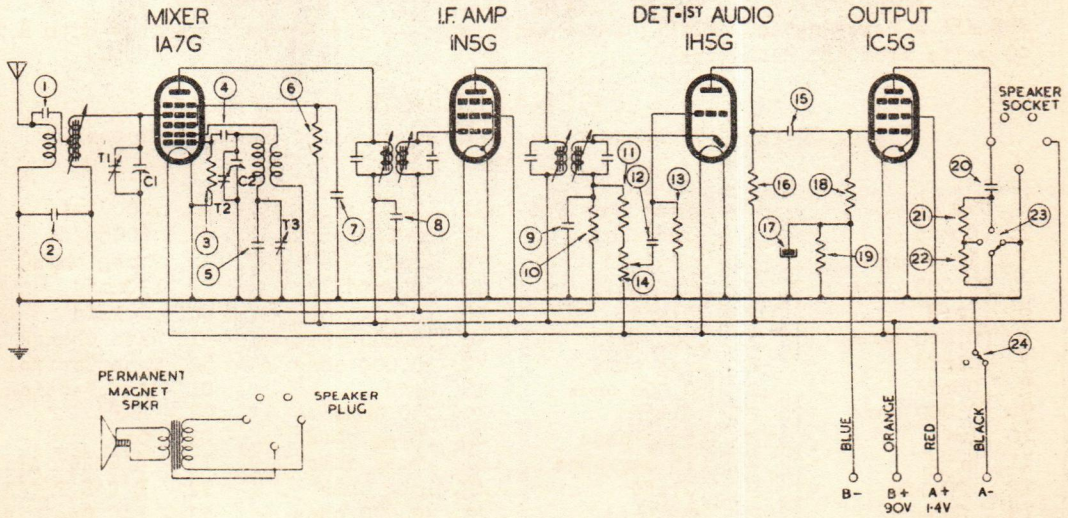
INTERMEDIATE FREQUENCY 458KC.

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6U7G	Radio Frequency Amp.	6	250	8	100	2	2.8	-	-
6K8G	Frequency Converter	6	250	3	100	6	2.8	100	3.5
6U7G	Intermediate Freq.Amp.	6	250	8	100	2	2.8	-	-
6G8G	Det. AVC Audio	6	110	.6	30	.1	2.8	-	-
6V6G	Power Output	6	245	30	250	1.5	17	-	-
5Z4G	Full-Wave Rectifier	5	360/360	35/35	-	-	-	-	-
6U5	Tuning Indicator	6	20	.25	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V. A.C input- no signal. Volume control on.

GENALEX BC675

Battery-Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

GENALEX BC675 (Contd.)

1. .0005mfd
2. .05mfd
3. .25meg ohms
4. 50mmfd
5. 390mmfd
6. 50,000 ohms
7. .1mfd
8. 5mfd
9. .00025mfd
10. 1meg ohms
11. 50,000 ohms
12. .01mfd
13. 1meg ohms
14. 5 meg ohms
15. .01mfd
16. 25meg ohms
17. 25mfd
18. 5 meg ohms
19. 750 ohms
20. .05mfd
21. 5000 ohms
22. 50,000 ohms
23. Tone Control
24. On-off switch

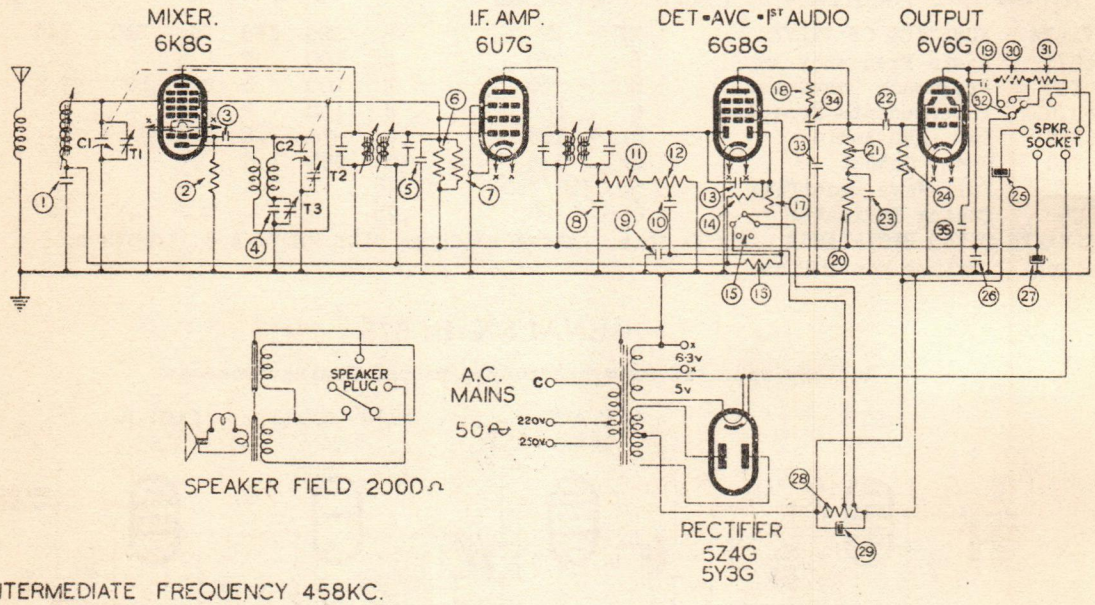
C1 - Aerial Section Gang
C2 - Osc.Section Gang
T1 - B/C Aerial Air Trimmer
T2 - B/C Osc.Air Trimm
T3 - B/C Padder Air Trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
1A7G	Frequency Converter	1.4	83	.4	40	.3	-	83.0	1.0
1N5G	Intermediate Freq.Amp.	1.4	83.0	1.0	83	.3	-	-	-
1H5G	Det. AVC Audio	1.4	60.0	.04	-	-	-	-	-
1C5G	Power Output	1.4	80.0	5.0	83	1.2	7.0	-	-

SPEAKER - PERMAGNETIC. NOTE: Above shows voltage and current readings with H.T. 90 volts from "B" batteries.

GENALEX BC605

A.C. Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. 1mfd
6. 20,000 ohms
7. 20,000 ohms
8. .00025mfd
9. .00025mfd
10. .01mfd
11 100,000 ohms
12. .5meg ohms
13. 0001mfd
14. .5meg ohms
15. Local Distance Switch
16. 1meg ohm
17. .5meg ohms
18. 1meg ohm
19. .05mfd
20. .1meg ohm
21. .1meg ohm
22. .01mfd
23. 5mfd
24. .5meg ohms
25. 8mfd
26. .5mfd
27. 16mfd
28. 250 ohms
29. 25mfd
30. 5000 ohms
31. 50,000 ohms
32. Tone Cont.
33. 0001mfd
34. .1mfd
35. .0005mfd 605 only

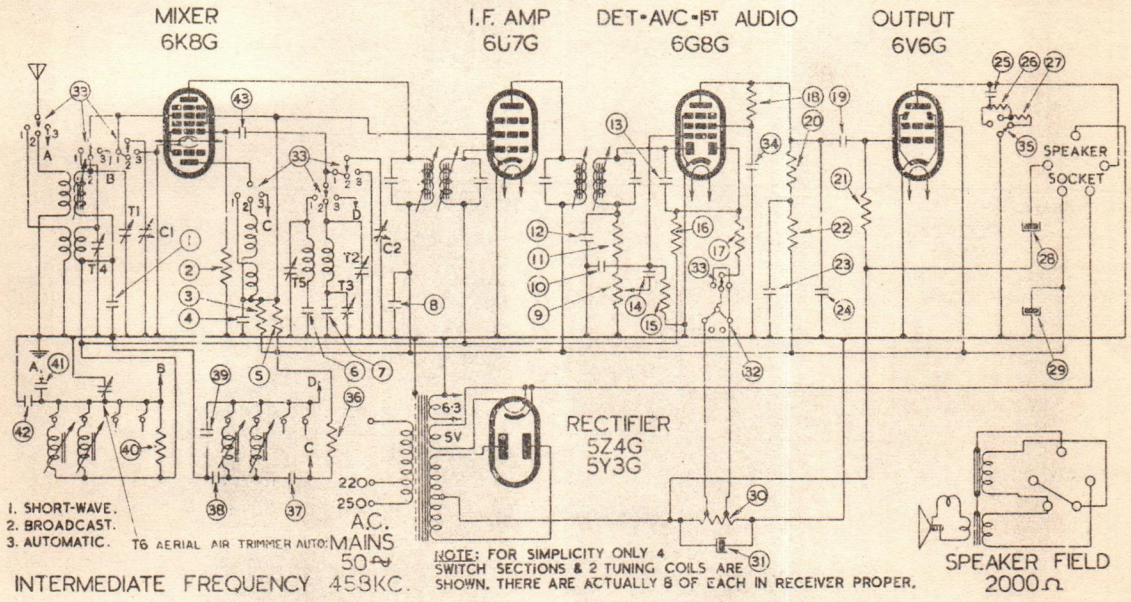
C1 - Aerial Section Gang
C2 - Oscillator Section Gang
T1 - B/C Aer.Air Trimm.
T2 - B/C Osc.Air Trimm.
T3 - B/C Padder Air Trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V. A.C. input- no signal. Volume control on.

GENALEX BC615

A.C. Operated Superheterodyne Automatic Tuning-Dual-Wave



INTERMEDIATE FREQUENCY 458KC.

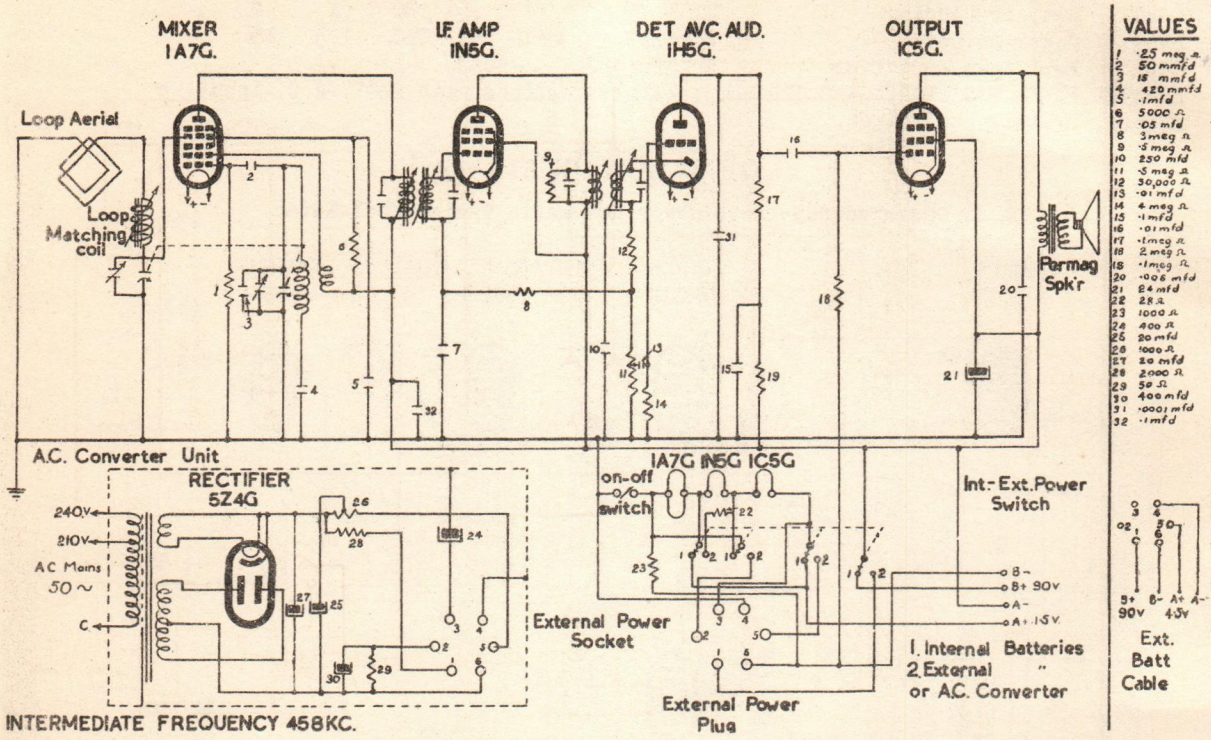
1. 05mfd
2. .05meg ohms
3. 20,000 ohms
4. 1mfd
5. 20,000 ohms
6. .006mfd
7. 420mmfd
8. .5mfd
9. .5meg ohms
10. .00025mfd
11. 1meg ohms
12. .00025mfd
13. .0001mfd
14. .01mfd
15. 1meg ohms
16. 5 meg ohms
17. 5 meg ohms
18. 1meg ohms
19. .01mfd
20. 1meg ohms
21. .5meg ohms
22. .1meg ohms
23. .5mfd
24. .0001mfd
25. .05mfd
26. 5000 ohms
27. 50,000 ohms
28. 8mfd
29. 16mfd
30. 250 ohms
31. 25mfd
32. Local Dist.
33. Wave-Change
34. .1mfd
35. Tone Cont.
36. .1meg ohms
37. .001mfd
38. .00025mfd
39. .0005mfd
40. 2meg ohms
41. 130mfd
42. .001mfd
43. 50mmfd

C1 - Aerial Section Gang
C2 - Osc.Section Gang
T1 - B/C Aer.Air Trim.
T2 - B/C Osc. " "
T3 - B/C Pad. " "
T4 - S/W Aer. " "
T5 - S/W Osc. " "

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V.A.C. input- no signal. Volume control on.

GENALEX BC676

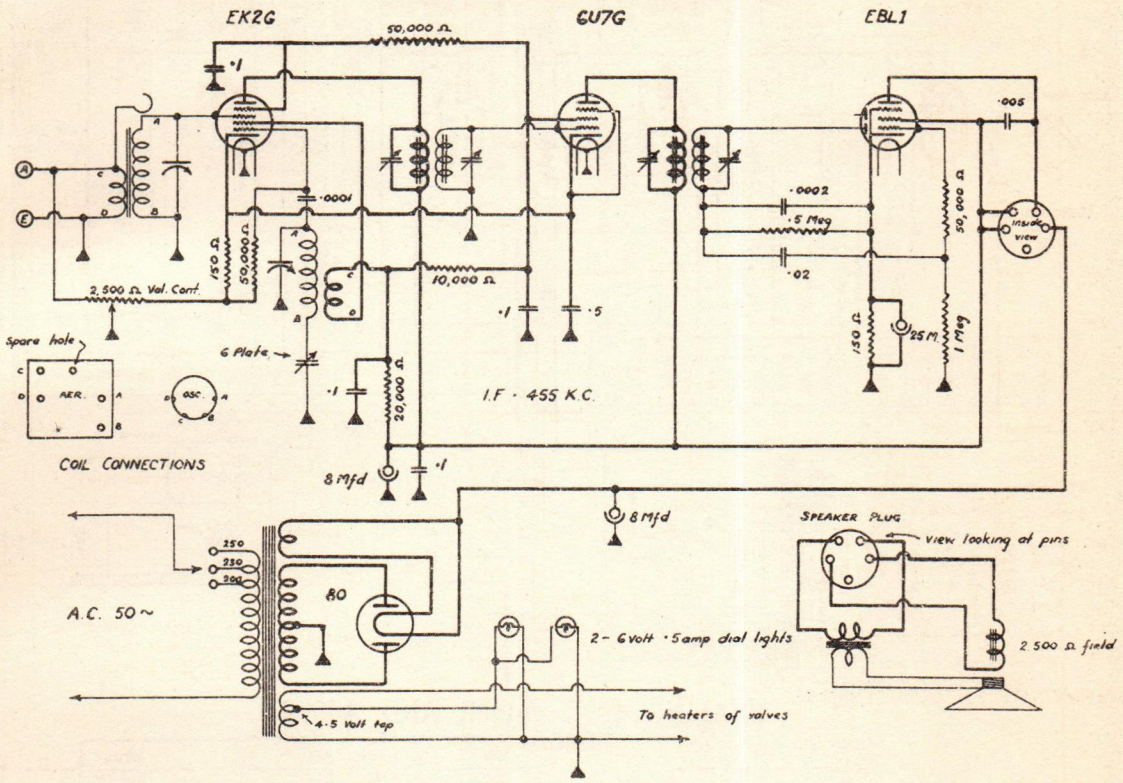


MEMORANDUM

HEALING RADIO

Manufactured by A. G. Healing, Ltd., 167 Franklin Street, Melbourne, C.1, Vic.

HEALING L308E, 329E AND 62



1,000 ohm per volt D.C.meter scales

VALVE	USE	A.C. FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	250V OSC.PLATE
EK2G	Osc.Mod.	6.2	2.5 to 16V	50 to 75	220	135 to 165
6U7G	I.F.	6.2	2.5 to 16V	100-140V	220	
EBL1	Det. A.F.	6.2	5.5	220	200	
80	Rectifier	4.9				

Frequency Range - 550 to 1500 kilocycles.
Intermediate Freq.- 455 K/Cs.
Speaker Field - 2,500 ohms
Voltage across Speaker Field - 125 volts.

Voltage measurements taken with aerial disconnected and no signal input. Some voltages vary as shown according to setting of volume control, first reading being with vol. control full on.
TRIMMERS - On the Models 329E & 62 the aerial section of the condenser gang is at the front, while on the L308E it is at the rear.

HEALING 409E, A409E, 49E AND A49E

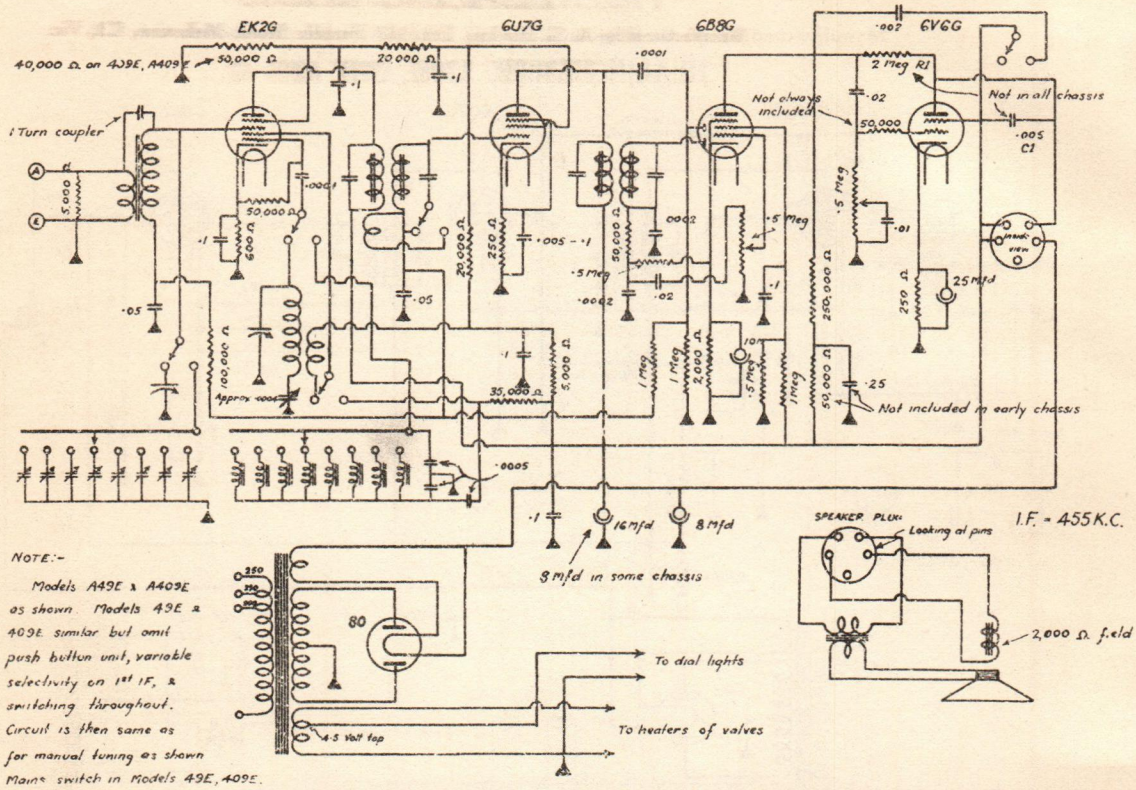
Typical Valve Voltages (measured to chassis)- 1,000 ohms per volt D.C. meter scales.

VALVE	USE	A.C. FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	250V OSC.PLATE
EK2G	Osc. Mod.	6.2	2.25	65	235	195 on B.C.
6U7G	I.F.	6.2	2.75	105	235	95 on P.B.
6B8G	Det. A.V.C. 1st A.F.	6.2	1.4	20	30	
6V6G	2nd A.F.	6.2	10.5	235	223	
80	Rectifier	4.9				

Frequency Range - 550 to 1620 kilocycles
Intermediate Freq.- 455 K/Cs.
Speaker Field - 2,000 ohms
Voltage across Speaker Field - 130 volts.

Voltage measurements taken with aerial disconnected and no signal input.
NOTES: As explained on the circuit diagram, the models 49E and 409E are identical with the A409E and A49E with the exception that they do not include push-button tuning. Consequently the change over switch from manual to push-button is omitted and an on-off switch in the mains input is substituted in its place.
In the circuit diagram a fixed condenser of .0002 value should be shown between the plate of the 6B8G valve and earth.

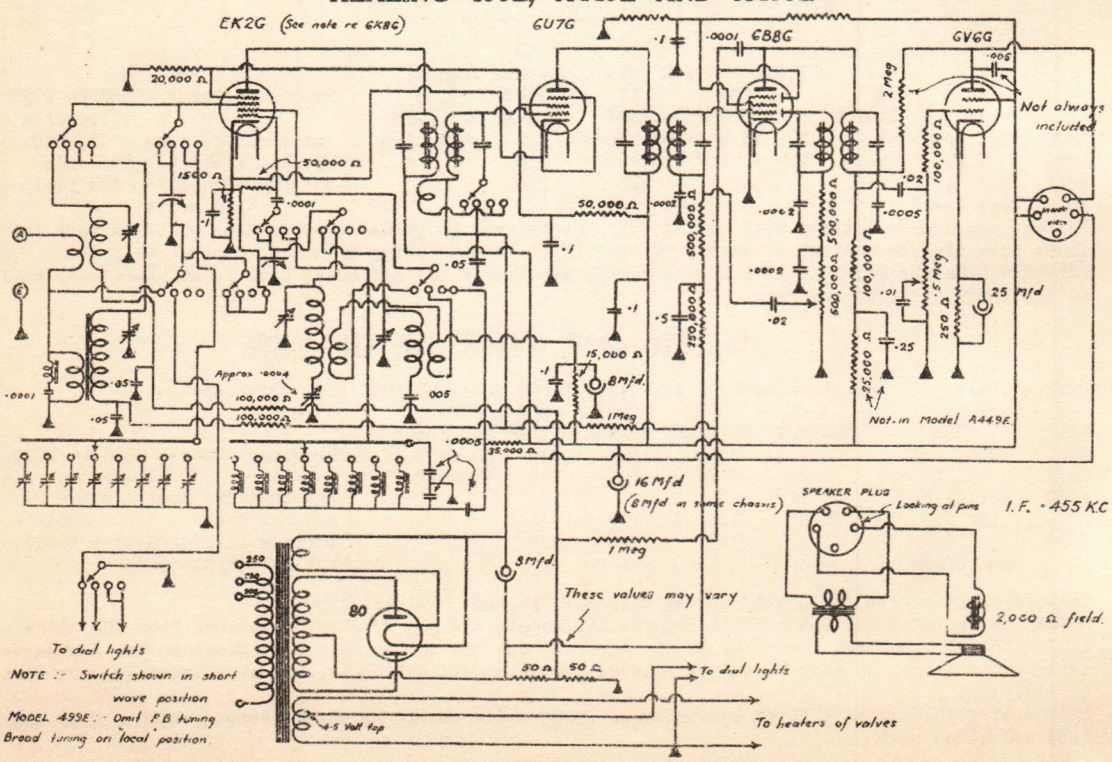
HEALING 409E, A409E, 49E and A49E (Contd.)



NOTE:-

Models A49E & A409E as shown. Models 49E & 409E similar but omit push button unit, variable selectivity on 1st I.F. & switching throughout. Circuit is then same as for manual tuning as shown. Mains switch in Models 49E, 409E.

HEALING 499E, A449E AND A499E



NOTE :- Switch shown in short wave position

MODEL 499E :- Omit S.B. tuning. Broad tuning on "local" position.

HEALING 499E, A449E AND A499E (Contd.)

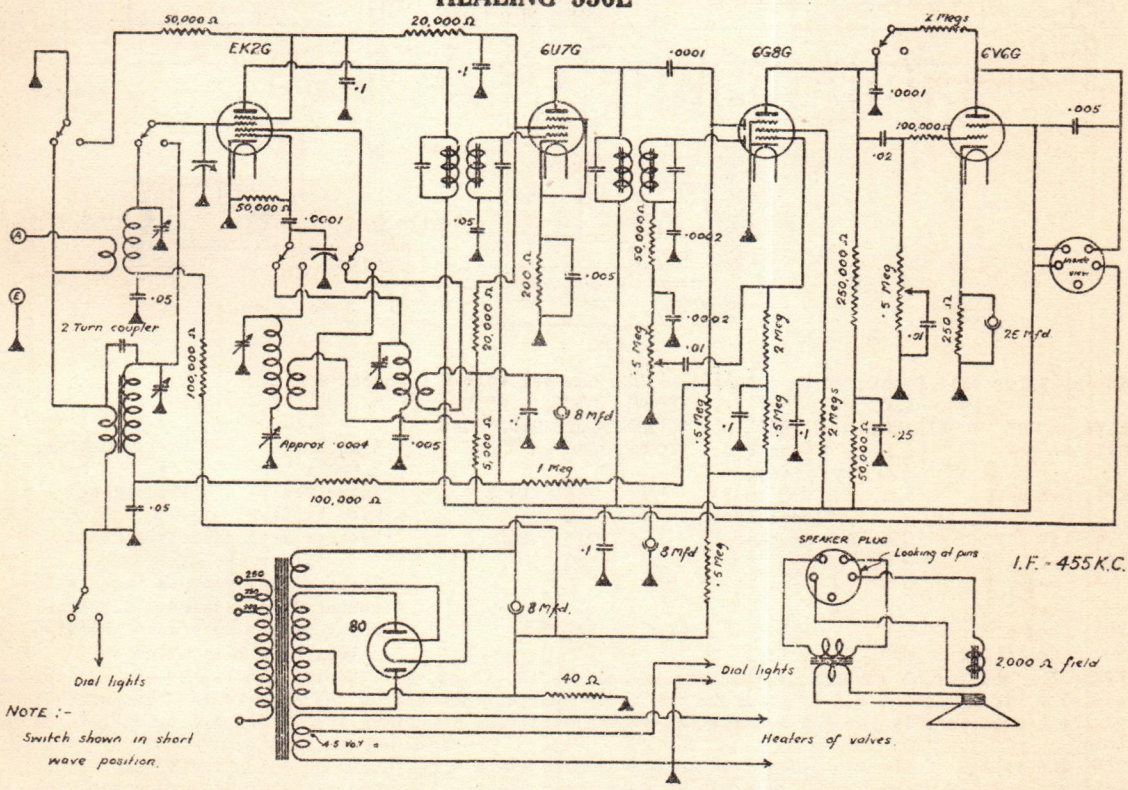
Typical Valve Voltages (measured to chassis)- 1,000 ohm per volt D.C.meter scales.

VALVE	USE	A.C. FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	250V OSC.PLATE
EK2G	Osc.Mod.	6.2	4.5 on "local" only	45	230	190 on B.C
6U7G	1st I.F.	6.2	4.5	45	230	100 on P.B
6U7G	1st I.F. 2nd I.F., 1st A.F.	6.2		55	55	
6V6G	2nd A.F.	6.2	11	230	220	
80	Rectifier	4.9				

Freq. Range - 550-1,620 K/cs, 7,890 to 24,000 K/cs.
Inter. Freq. - 455 K/cs
Speaker Field - 2,000 ohms
Voltage across Speaker Field - 130 volts

Voltage measurements taken with aerial disconnected and no signal input. Switch on b/cast position, except where noted. TRIMMERS - In the Models A449E and A499E the aerial trimmers are nearest the back of the chassis, whilst in the Model 499E, they are nearer the front. The S/W trimmers may be easily identified because of their connection to the enamelled wire on the short-wave coils.
SPECIAL NOTE re 6K8G VALVE - In some chasses this valve was used as the osc. instead of the EK2G, with a slightly different circuit. The 6K8G screen and osc. plate inputs were fed from the high tension through a 15,000 ohm resistor, giving a voltage of approximately 100. The screen of the 6U7G I.F. valve was also run at about 100 volts, being fed from the high tension through 50,000 ohms, with 40,000 ohms to earth. The remaining difference between the two arrangements is that A.V.C. was applied to the 6K8G on s/w, the grid return of the s/w coil being made to the same point as the broadcast grid return. The Model 499E differs from the A449E and A499E in that push-button tuning is not included. The wave change switch has three positions; s/w, b/cast, & b/cast local. In this latter position the sensitivity is reduced by means of a 1,500 ohm resistor in the EK2G and 6U7G cathodes and the first I.F. is broadened.

HEALING 550E



Typical Valve Volt.(measured to chassis)- 1,000 ohms per volt D.C.meter scales.

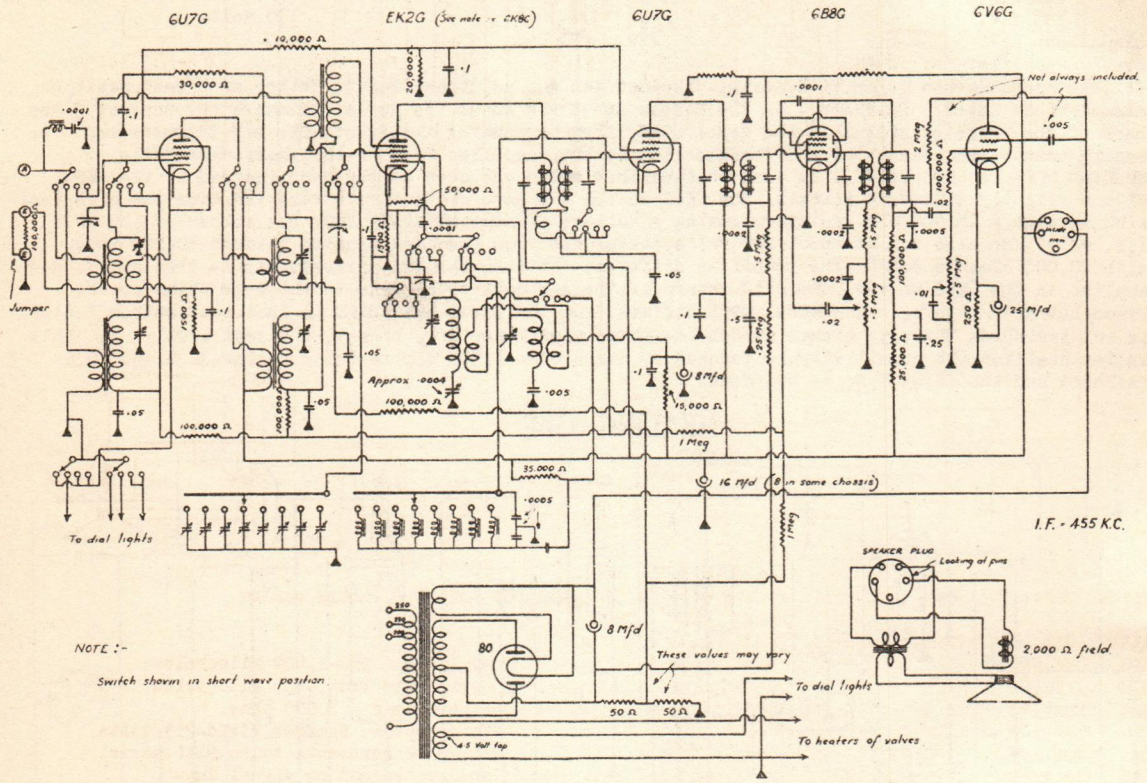
VALVE	USE	A.C. FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	250V OSC.PLATE
EK2G	Osc. Mod.	6.2		55-BC. 75-SW.	225	190
6U7G	I.F.	6.2	2	100	225	
6G8G	Det.AVC 1st AF	6.2		20	40	
6V6G	2nd A.F.	6.2	11	225	215	
80	Rectifier	4.9				

Freq.Range - 550-1,620 K/cs.
7,890 to 24,000 kilocycles.
Inter.Freq.-455 k/cs.
Speaker Field - 2,000 ohms

HEALING 550E (Contd.)

Voltage across back bias resistor - 2.3 volts. Voltage across speaker field - 130 volts.
Voltage measurements taken with aerial disconnected and no signal input.
TRIMMERS - The osc. trimmers are nearest the end of the chassis. Sometimes the b/cast aerial trimmer is omitted. The s/w trimmers may be identified by tracing their connection to the enamelled wire leads from the short-wave coils.

HEALING A599E



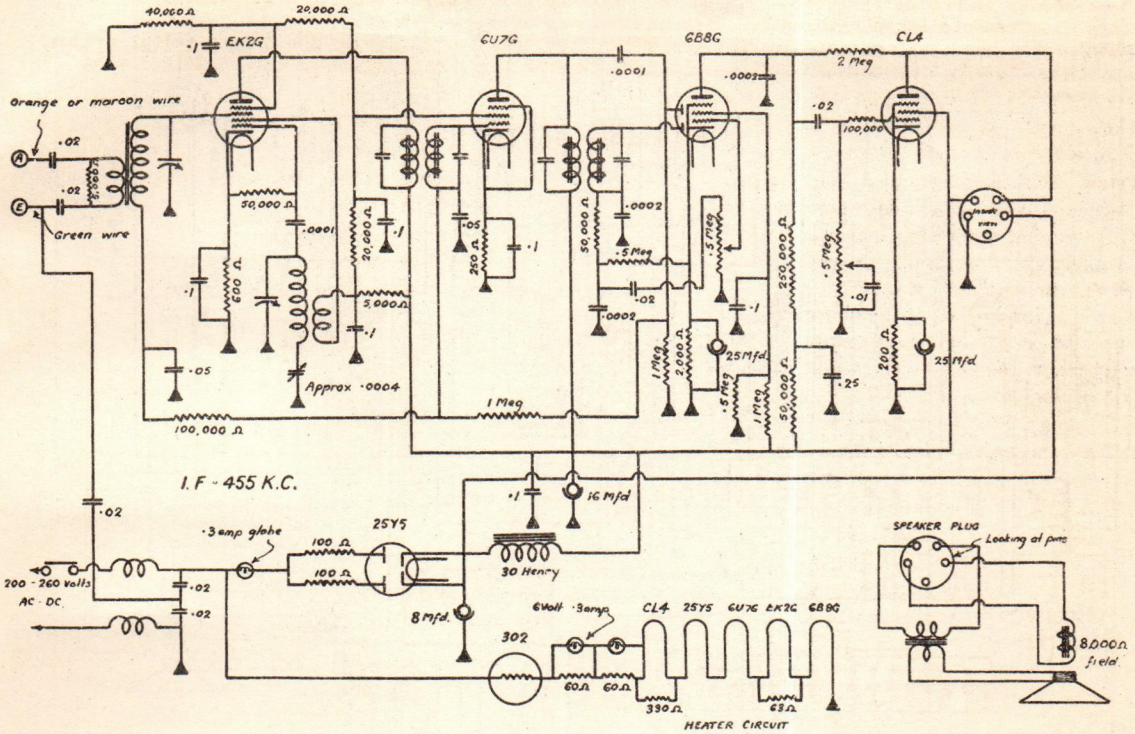
Typical Valve Volt.(measured to chassis)- 1,000 ohm per volt D.C. meter scales.

VALVE	USE	A.C. FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	OSC.PLATE
6U7G	R.F.	6.2	4.5 on B.C. only	100	235	
EK2G	Osc.Mod.	6.2	4.5 on "local" only	55	235	190B.C.
6U7G	1st I.F.	6.2	4.5 on "local"	55	235	100P.B.
6B8G	Det. AVC 2nd I.F. 1st A.F.	6.2		50	60	
6V6G	2nd A.F.	6.2	11	235	225	
80	Rectifier	4.9				

Freq.Range - 550 to 1,620 K/cs. 7,890 to 24,000 K/cs.
Inter.Freq.- 455 kilocycles
Speaker Field - 2,000 ohm
Voltage across Speaker Field - 135 volts.
Voltage measurements taken with aerial disconnected & no signal input.Switch on b/cast position, unless specially noted.

TRIMMERS - The aerial section of the gang is nearest the front, R.F. in the middle and osc. at the rear. The b/cast aerial & R.F. trimmers are those nearest the back of the chassis in each section, and the b/cast osc. is the one nearest the switch assembly. Sometimes the b/cast R.F.trimmer is omitted.
NOTE: The values of the resistors feeding the 6B8G screen are not shown on the circuit diagram. These are usually both 250,000 ohms,but in some cases the value of the resistor between the screen and earth may be 500,000 or even 1 megohm.
SPECIAL NOTE RE 6K8G VALVE.-In some chasses this valve was used as the osc.instead of the EK2G,with a slightly different circuit.The 6K8G screen and osc.plate inputs were fed from the high tension through a 15,000 ohm resistor,with a voltage of approx.100. The screens of the 6U7G IF & RF valves are also run at about 100 volts,being fed from H.T.through 25,000 ohms,with 40,000 ohms to earth. The remaining difference between the two arrangements is that AVC was applied to the 6K8G on s/ws. the grid return being made to the same point as the broadcast grid return.

HEALING 409C A.C./D.C.



Typical Valve Voltages (230 volts A.C. input)- 1,000 ohms per volt D.C. meter scales .

VALVE	USE	FILAMENT	CATHODE 50V	SCREEN 250V	PLATE 250V	OSC.PLATE 250V
EK2G	Osc.Mod.	6.2	2.5	53	192	175
6U7G	I.F.	6.2	2.5	95	192	
6B8G	Det.AVC	6.2	1.2	20	30	
	1st A.F.					
CL4	2nd A.F.	33	7.75	192	184	
25Y5	Rectifier	25	213			

Freq.Range - 550-1,620 kilocycles.
Intermediate Freq.-455 kilocycles.
Speaker Field - 8,000 ohms.
Voltage across Speaker Field-213 volts.
Voltage measurements taken with aerial disconnected and no signal input.

TRIMMERS - Aerial section of the condenser gang is at the back.

HEALING A449C A.C./D.C.

Typical Valve Voltages (230 volts A.C. input)- 1,000 ohms per volt D.C. meter scales

VALVE	USE	FILAMENT	CATHODE 50V	SCREEN 250V	PLATE 250V	OSC.PLATE 250V
EK2G	Osc.Mod.	6.3 }	4.5 on	45	192 }	170 on B.C
6U7G	1st I.F.	6.3 }	"local" only	45	192 }	100 on P.B
6B8G	Det. AVC					
	2nd I.F.					
	1st A.F.	6.3		50	50	
CL4	2nd A.F.	33	7.5	192	184	
25Y5	Rectifier	25	213			

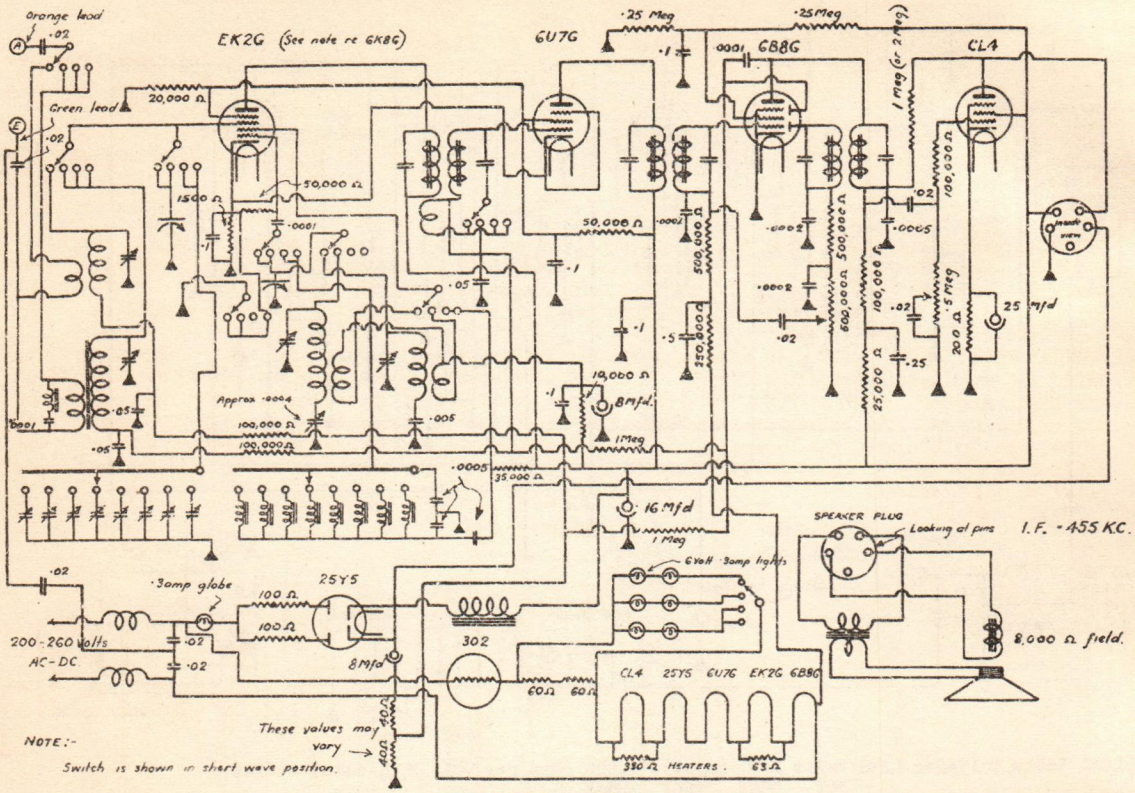
Freq.Range - 550-1,620 K/cs.
7,890 to 24,000 kilocycles.
Intermed.Freq.- 455 K/cs.
Speaker Field - 8,000 ohms
Voltage across Speaker Field - 213 volts.

Voltage measurements taken with aerial disconnected and no signal input. Switch on b/cast position, except where noted.

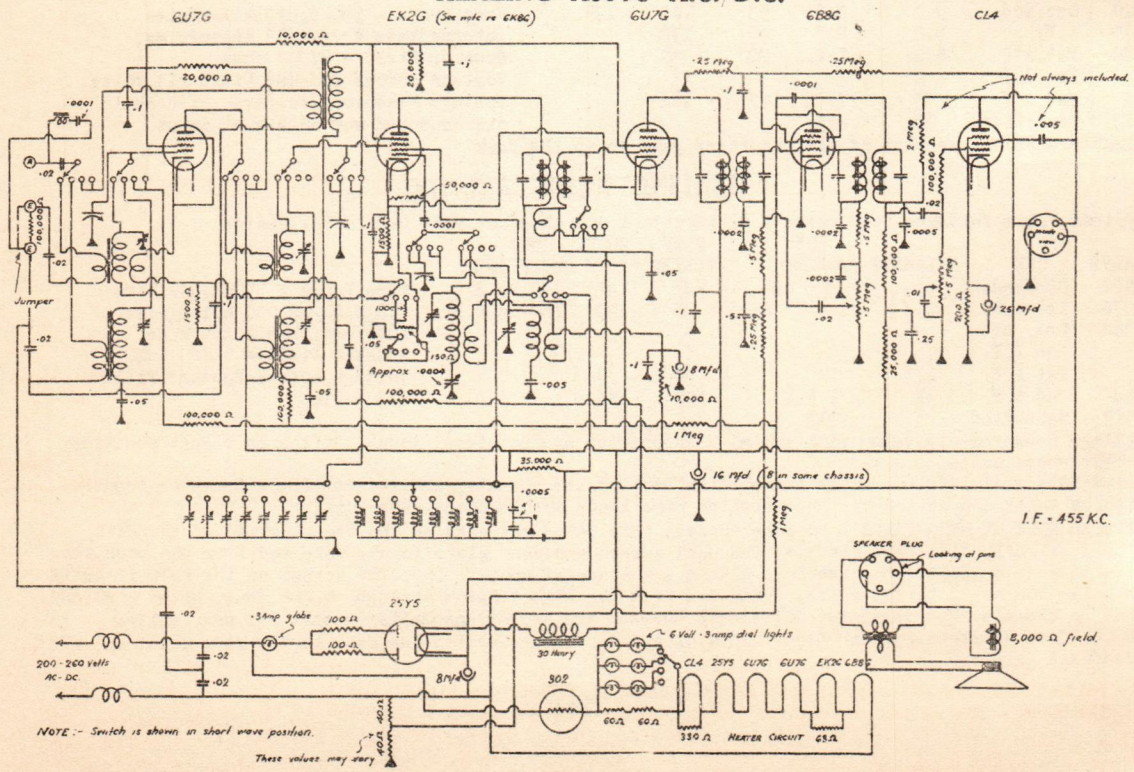
TRIMMERS - Aerial trimmers are nearest the back of the chassis. Short-wave trimmers may be identified by their connection to the enamelled wire leads on the short-wave coils.

SPECIAL NOTE RE 6K8G VALVE - In some chasses this valve was used as the osc. instead of the EK2G, with a slightly different circuit. The 6K8G screen and osc. plate inputs were fed from the high tension through a 12,500 ohm resistor, giving a voltage of approx. 100. The screen of the 6U7G IF valve was also run at 90 to 100 volts, being fed from the high tension through 50,000 ohms, with 40,000 ohms to chassis. The remaining difference between the two arrangements is that AVC was applied to the 6K8G on short-waves, the grid return of the short-wave coil being made to the same point as the broadcast grid return.

HEALING A449C (Contd.)



HEALING A599C · A.C./D.C.



HEALING A599C (Contd.)

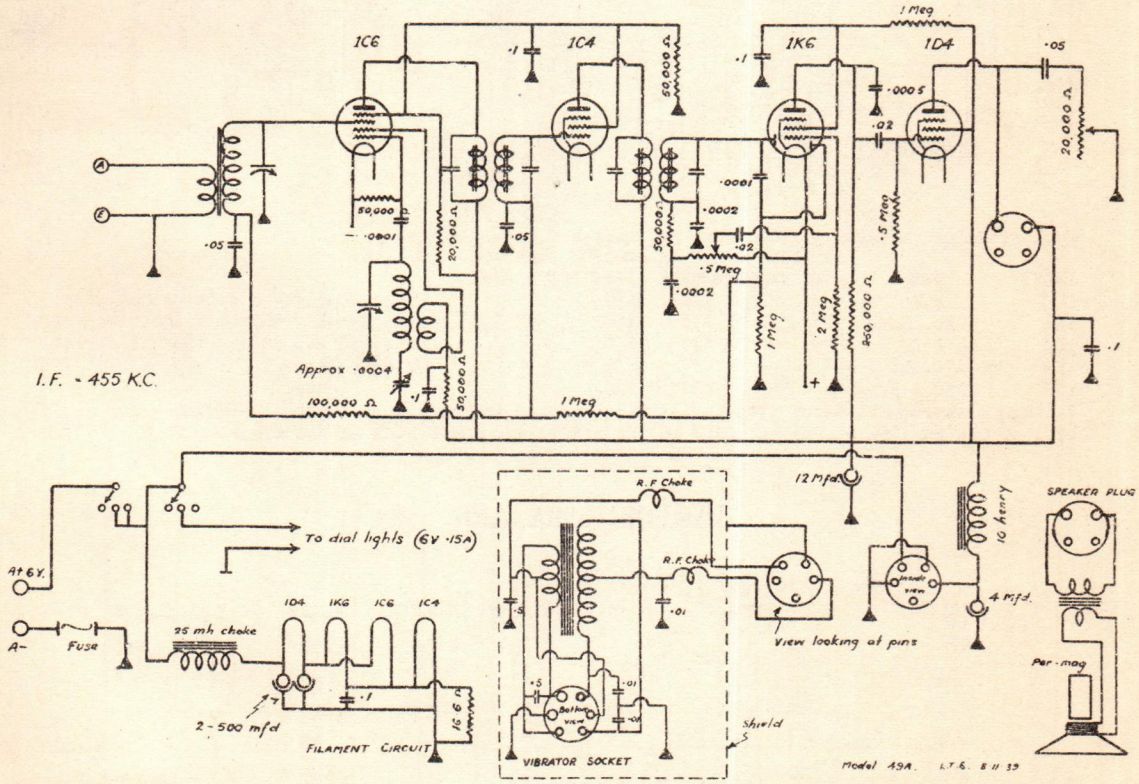
Typical Valve Voltages (230 volts A.C. input)- 1,000 ohms per volt D.C. meter scales

VALVE	USE	FILAMENT	50V CATHODE	250V SCREEN	250V PLATE	250V OSC.PLATE
6U7G	R.F.	6.3	4.5	100	192	160-B.C.
EK2G	Osc. Mod.	6.3	1	55	192	85-P.B.
6U7G	1st I.F.	6.3	1	55	192	
6B8G	2nd I.F.	6.3		50	50	
	Det. A.V.C. 1st A.F.					
CL4	2nd A.F.	33	8	192	182	
25Y5	Rectifier	25	215			

Freq. Range - 550-1,620 K/cs., 7,890-24,000 kilocycles.
Intermediate Freq.-455 K/cs.
Speaker Field - 8,000 ohms
Voltage across Speaker Field - 215 volts.

Voltage measurements taken with aerial disconnected and no signal input. Switch on b/cast position.
TRIMMERS.-Aerial section of gang is nearest the front, R.F. in the middle and oscillator at the rear. The broadcast aerial and R.F. trimmers are those nearest the back of the chassis in each section, and the broadcast oscillator is the one nearest the switch assembly. Sometimes the broadcast R.F. trimmer is omitted.
SPECIAL NOTE RE 6K8G VALVE - In some chasses this valve was used as the oscillator instead of the EK2G, with a slightly different circuit. The 6K8G screen and oscillator plate inputs were fed from the high tension through a 12,500 ohm resistor with a voltage of approximately 100. The screens of the 6U7G R.F. and I.F. valves are also run at 90 to 100 volts, being fed through 20,000 ohms with 40,000 ohms to chassis. The remaining difference between the two arrangements is that A.V.C. was applied to the 6K8G on short-waves, the grid return of the short-wave coil being made to the same point as the broadcast coil.

HEALING 49A



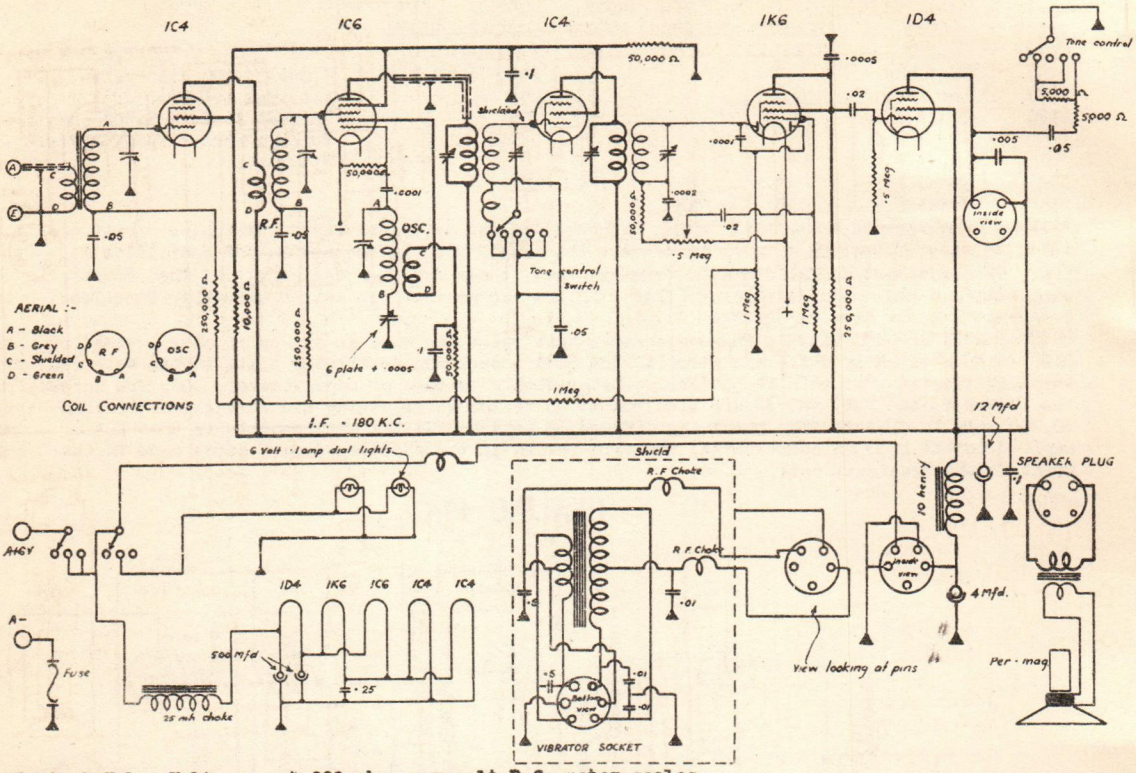
Typical Valve Voltages - 1,000 ohms per volt D.C. meter scales.

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1C6	Osc. Mod.	2	65	155	60
1C4	I.F.	2	65	155	
1K6	Det.AVC,1st A.F.	2	30	40	
1D4	2nd A.F.	2	155	150	

Frequency Range - 550-1,620 kilocycles.
Power Supply - 6 volt Accumulator
Intermediate Freq.-455 kilocycles.
Battery Current-1 amp without dial light

Voltage measurements taken with aerial disconnected and no signal input.
TRIMMERS - The aerial section of the condenser gang is nearest the back of the chassis.

HEALING 525A



Typical Valve Voltages - 1,000 ohms per volt D.C. meter scales.

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1C4	R.F.	2	70	150	
1C6	Osc. Mod.	2	70	150	50
1C4	I.F.	2	70	150	
1K6	Det.AVC,1st A.F.	2		45	
1D4	2nd A.F.	2	150	140	

Power Supply - 6 Volt accumulator.
Freq.Range - 550 to 1,620 kilocycles
Intermediate Freq.- 180 kilocycles
Battery Current - 1 amp.without dial lights.

Voltage measurements taken with aerial disconnected and no signal input. TRIMMERS - The aerial section of the gang is at the back,R.F.in the middle,and oscillator at the front.

HEALING 599A AND 559A

VALVE	USE	FILAMENT	SCREEN	PLATE	OSC. PLATE
1C6	Osc. Mod.	2	50	150	50 - B.C.
1C4	1st I.F.	2	45-50	150	90 - S.W.
1C4	2nd I.F.	2	45-50	150	
1K6	Det.A.V.C., 1st A.F.	2		65	
1D4	2nd A.F.	2	150	145	

Frequency Range - 550-1,620 kilocycles, 7,890-24,000 kilocycles. Power Supply - 6 Volt Accumulator.

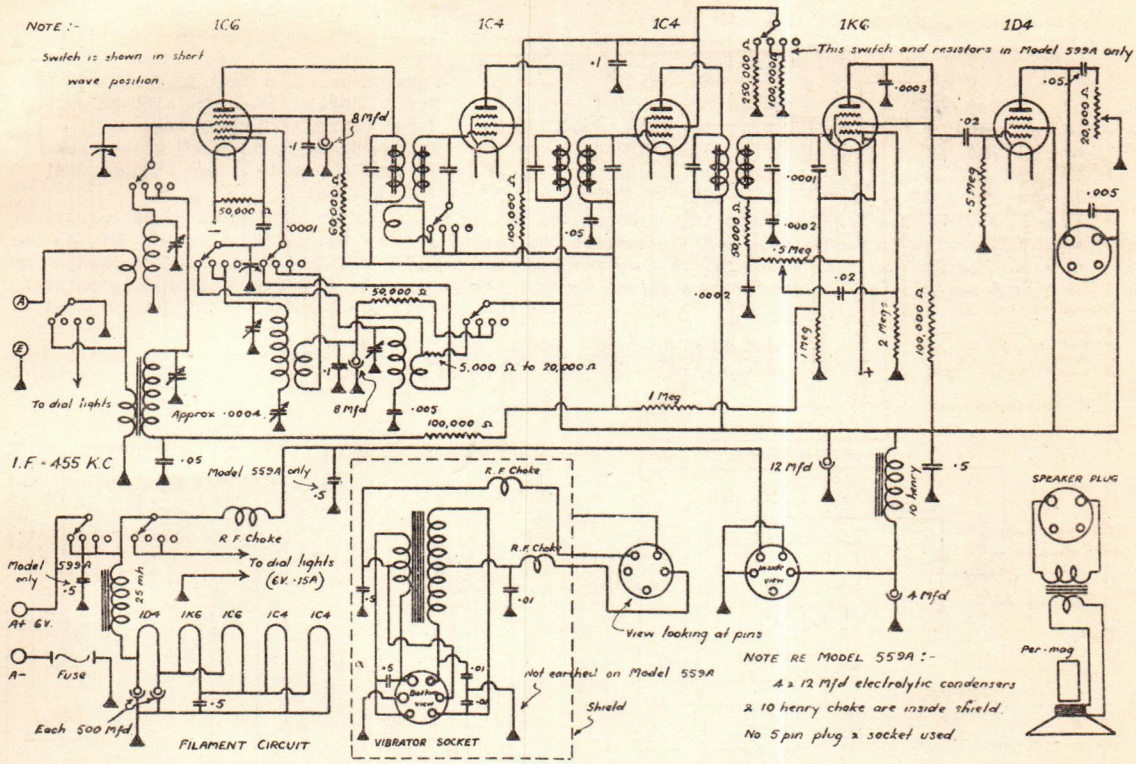
Intermediate Frequency - 455 kilocycles. Battery Current - 1 amp without dial light.

The above voltages are for the 599A. The 559A is the same, except that 1C4 screens are approximately 5 volts higher.

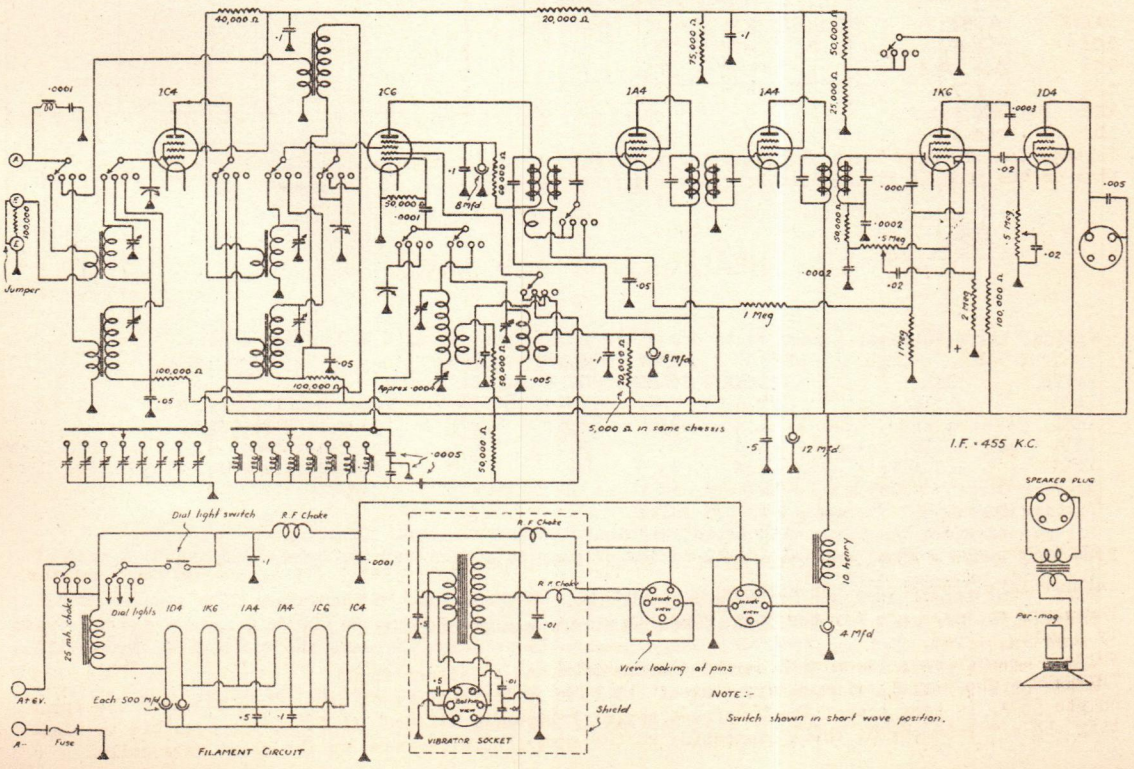
Voltage measurements taken with aerial disconnected and no signal input.

TRIMMERS - The aerial trimmers are nearest the back of the chassis on Model 599A and near the front on the 559A. In some cases, the broadcast aerial trimmer is omitted. It is always possible to identify the s/w trimmers by their connection to the enamelled wire leads on the short-wave coils.

HEALING 599A AND 559A (Contd.)



HEALING A699A



HEALING A699A (Contd.)

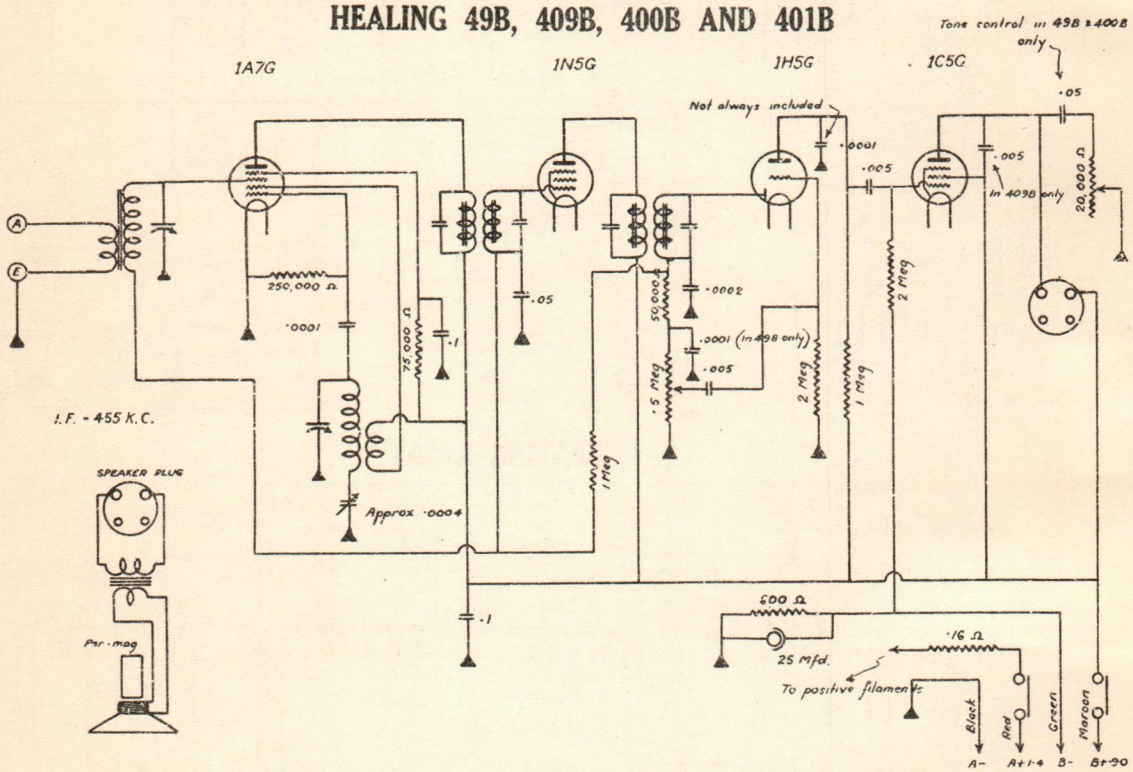
Typical Valve Voltages - 1,000 ohms per volt D.C. meter scales

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1C4	R.F.	2	65	155	
1C6	Osc. Mod.	2	50	155	55 - B.C. / 100 - S.W.
1A4	1st I.F.	2	35	155	
1A4	2nd I.F.	2	35	155	
1K6	Det.AVC,1st A.F.	2		65	
1D4	2nd A.F.	2	155	148	

Power Supply - 6 Volt Accumulator
Freq. Range - 550-1,620 kilocycles.
7,890 to 24,000 kilocycles.
Intermediate Freq. - 455 kilocycles
Battery current - 1 amp without dial lights.

Voltage measurements taken with aerial disconnected and no signal input. Switch on b/cast position.
TRIMMERS - Aerial section of the gang is nearest the front, R.F. in the middle, and osc. at the rear. The b/cast aerial and R.F. trimmers are those nearest the back of the chassis in each section, and the b/cast osc. is the one nearest the switch assembly. Sometimes the b/cast R.F. trimmer is omitted.

HEALING 49B, 409B, 400B AND 401B



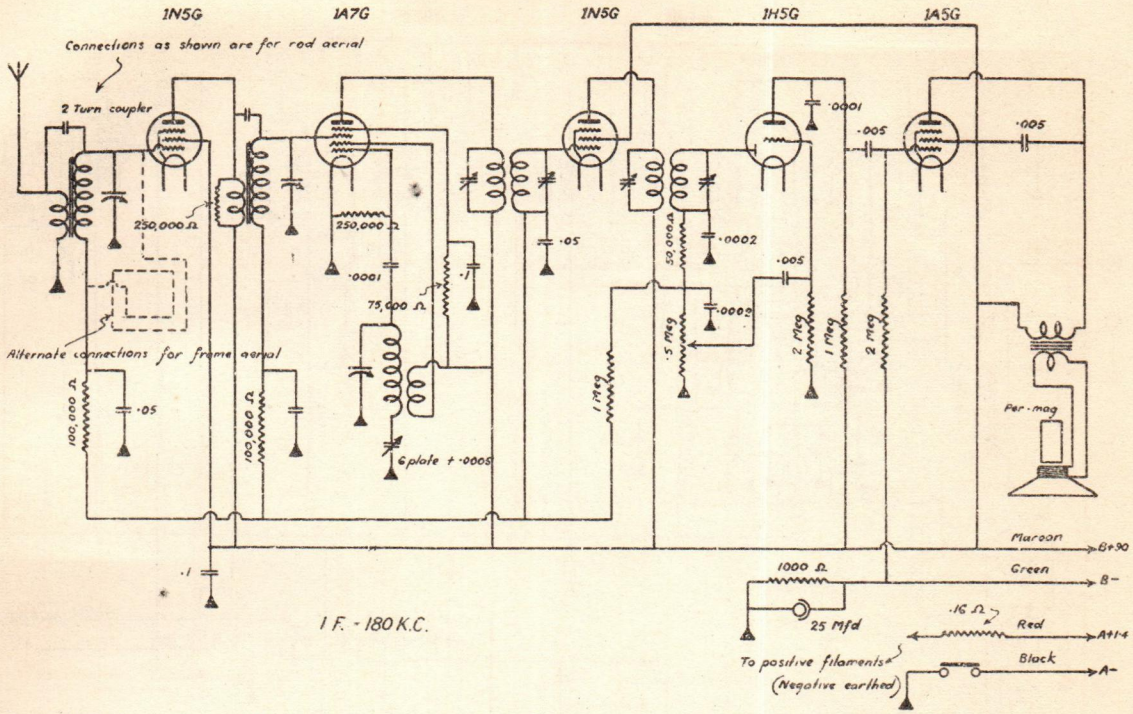
Typical Valve Voltages (measured to chassis)- 1,000 ohms per volt D.C. meter scales.

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1A7G	Osc. Mod.	1.4	40	83.5	83.5
1N5G	I.F.	1.4	83.5	83.5	
1H5G	Det. A.V.C. 1st A.F.	1.4		20	
1C5G	2nd A.F.	1.4	83.5	80	

Power Supply - 1.5 volt A Battery, 90 volt B Battery.
Frequency Range - 550 to 1,620 K/cs
Intermediate Freq. - 455 K/cs.

Battery Current - .25 amp. A Battery and 11 ma. B Battery
Voltage across 600 ohm resistor, 6.5 volts.
Voltage measurements taken with aerial disconnected and no signal input.
TRIMMERS - The aerial section of the condenser gang is at the back on models 49B and 400B, and at the front on model 409B.
NOTE: - In Models 409B and 49B some variation may be observed in the values of the audio coupling components. For example, the 1H5G plate resistor was altered from 250,000 to 1 megohm, and the grid resistors on the 1H5G and 1C5G both made 2 megohm in order to increase the audio gain. Those values shown on the circuit will give maximum audio gain.
MODEL 401B is identical with 400B, except that the 1Q5G valve is used in the output stage, with a 450 ohm bias resistor in the B - lead instead of 600 ohms.

HEALING 500B



Typical Valve Voltage (measured to chassis)- 1,000 ohms per volt D.C. meter scales.

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1N5G	R.F.	1.4	85	85	
1A7G	Osc.Mod.	1.4	40	85	85
1N5G	I.F.	1.4	85	85	
1H5G	Det.AVC,1st A.F.	1.4		20	
1A5G	2nd A.F.	1.4	85	83	

Power Supply - 1.5 volt A Battery, 90 volt B Battery

Freq. Range - 550 to 1,500 K/cs.

Intermediate Frequency - 180 kilocycles.

Battery Current - .25 amp A Battery, 6 ma. B Battery.

Voltage measurements taken with aerial disconnected and no signal input.

TRIMMERS - The aerial section of the gang is at the front, R.F. in the middle, and oscillator at the back.

HEALING 599B

Typical Valve Voltages(measured to chassis)- 1,000 ohms per volt D.C. meter scales.

VALVE	USE	10V FILAMENT	250V SCREEN	250V PLATE	250V OSC.PLATE
1C6	Osc. Mod.	2	40	130	50 - B.C.
1A4	1st I.F.	2	40	130	95 - S.W.
1A4	2nd I.F.	2	40	130	
1B5	Det. A.V.C. 1st A.F.	2		80	
1F5G	2nd A.F.	2	122	128	

Power Supply - 2 Volt A Battery, 135 volt B Battery

Frequency Range - 550-1,620 kilocycles, 7,890 to 24,000 kilocycles.

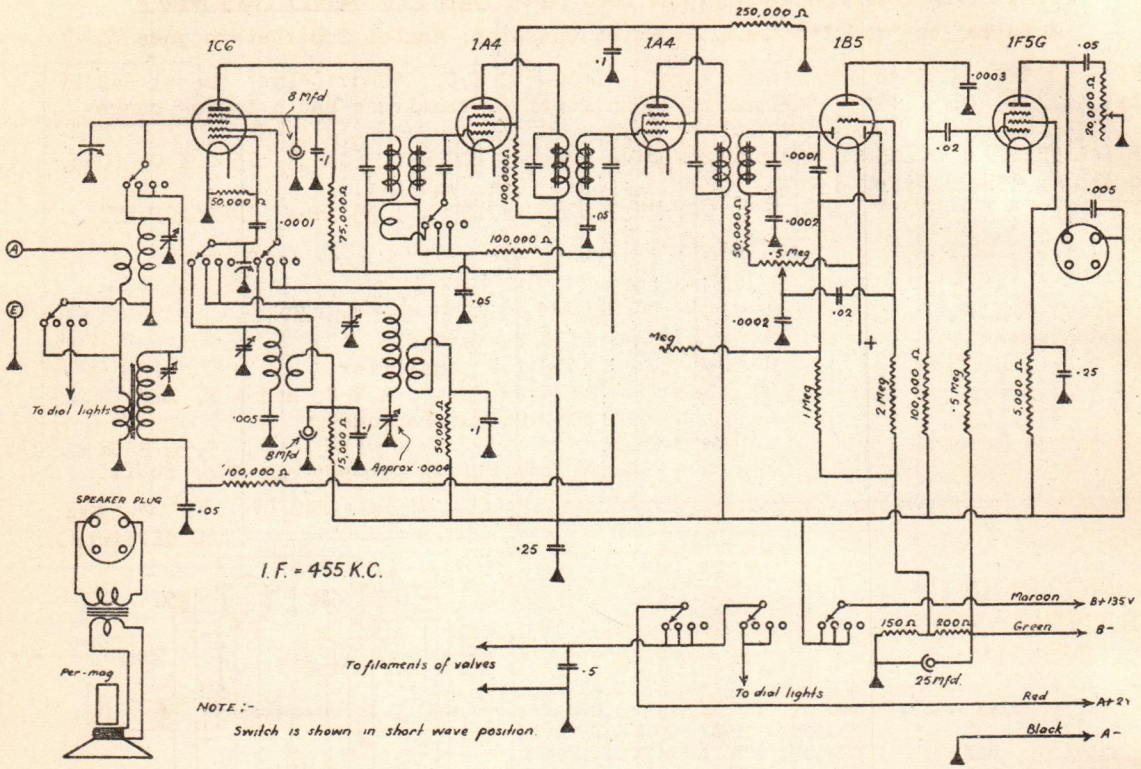
Intermediate Frequency - 455 kilocycles.

Battery Current - .42 amp from A Battery, 12 to 16 ma. from B Battery.

Voltage across 150 and 200 ohm resistors in B neg. lead - 5 volts.

Voltage measurements taken with aerial disconnected and no signal input.

TRIMMERS - Aerial trimmers are nearest the back of the chassis, but it should be noted that in some cases the broadcast aerial trimmer is omitted.



NOTES

In cases where the b/cast band tuning has been extended to the range 550-1620 K.C., the same positions, i.e., 1400 K.C. and 600 K.C. should be used for trimmer and padder adjustments respectively. On the short-wave range the trimmers should be adjusted at 14 metres (21,420 K.C.) and the coil tracking may be checked on the 31 metre band.

The correct positions on which to set the pointers in the 1939 bakelite models using the straight line dial, and the console quadrant dial are as follows:-On the bakelite mantels, with the condenser gang plates fully meshed the pointer should be set half-way between the two lines dividing the main scale containing the station names from the portion containing the numbers 2,3,4, etc. On most of the console dials, there is a small white line at the bottom of the dial near the left-hand end. This should be used to set the pointer when the gang is fully in. In one model this line is not included, and when servicing these chasses, the pointer should be set to the right-hand line of the squares containing the numbers 2,3,4 etc.

To make minor adjustments to the dial readings, it is not necessary to remove the chassis from the cabinet. The screw clamping the pointer drive cord is accessible from the rear of the cabinet & adjustment at the point is sufficient if the stations are all reading either high or low.

PUSH BUTTON CIRCUIT - The condensers tuning these circuits are of a special silvered mica construction, and are comparatively trouble-free, but we desire to add the warning that, if ever a faulty condenser in this circuit is replaced, exactly the same type should be substituted, otherwise frequency drift may result. Full instructions for alignment of the push-button circuits are contained in the instruction sheet sent with each receiver, but in case this has been misplaced, we will repeat the information here.

SETTING PRESS-BUTTON STATION NAMES - Remove the two thumb screws and lift the escutcheon from the press-button knobs. Cut the eight stations of your selection from the card supplied, and place them between the celluloid and glass strips in the escutcheon, making sure that they are in the order of their kilocycle rating, lowest at the left and highest at the right.

The kilocycle tuning ranges of the button controls are, from left to right:-

No.1-540 to 980 k.c.	No.4 - 760 to 1,300 k.c.	No.7 - 920 to 1,560 k.c.
No.2-540 to 980 k.c.	No.5 - 760 to 1,300 k.c.	No.8 - 920 to 1,560 k.c.
No.3-540 to 980 k.c.	No.6 - 920 to 1,560 k.c.	

It is necessary, of course, to choose stations whose kilocycle ratings come within these button-tuning ranges.

HOTPOINT-BANDMASTER RADIO

Manufactured by Australian General Electric Ltd., 93 Clarence Street, Sydney, N.S.W

HOTPOINT-BANDMASTER 549 MV, 549 DV AND 549 MVZ

4 Valve, one and two band, Vibrator Operated, Mantel Superheterodynes

TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (Model 549 DV only) - 13.6-43M. (NOTE: Early production Model 60 receivers had a tuning range of 1500-550 K.C.)
R.F. ALIGNMENT SETTINGS. "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aer.) "Short Wave" (Model 549 DV)) - 15M. (Osc. and Aer.)
INTERMEDIATE FREQUENCY - 460 K.C. CURRENT CONSUMPTION - 1.25 amps. REPLACEMENT FUSE - 3.0 amps.

VALVE COMPLEMENT -

Model 549 MV.
1C7G Converter
1M5G I.F. amplifier
6G8G I.F. amp., 2nd det., A.V.C., and A.F. Amp.
1L5G Output Pentode

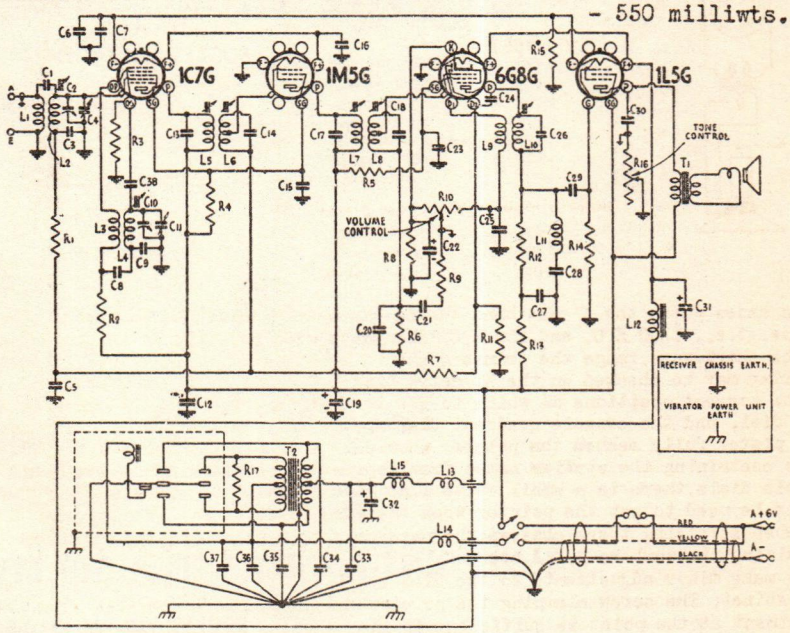
Models 549 DV and 549 MVZ.
1C7G Converter
1D5G I.F. Amplifier
6T7G 2nd det., A.V C. and A.F. Amp.
1G5G Output Pentode

VIBRATOR - Model 549 MV Oak Type 35UH, Models 549 DV and 549 MVZ Oak Type 65UH or 65UT.
Undistorted Power Output - Model 549 MV-350 milliwatts, Models 549 DV and 549 MVZ - 550 milliwts.

HOTPOINT-BANDMASTER 549 MV

Code No.	RESISTORS
R1	250,000 ohms 1/3 W.
R2	50,000 ohms 1 W.
R3	60,000 ohms, 1/3 W.
R4	50,000 ohms 1 W.
R5	500,000 ohms 1 W.
R6	1.75 megohms, 1/3 W.
R7	1 megohm 1/3 W.
R8	2,000 ohms 1/3 W.
R9	500,000 ohms 1/3 W.
R10	500,000 ohms Volume Control.
R11	1 megohm 1/3 W.
R12	100,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	500,000 ohms 1/3 W.
R15	33.3 ohms wire wound.
R16	100,000 ohms Tone Control.
R17	400 ohms 1/3 W.

Code No.	CONDENSERS
C1	4 mmfd. mica.
C2	2-10 mmfd. air trim.
C3	.05 mfd. paper.
C4	Tuning Condenser.
C5	05 mfd. paper.
C6	.5 mfd. paper.
C7	110 mmfd. mica (L).
C8	.05 mfd. paper.
C9	440 mmfd. mica (Padder).
C10	16-34 mmfd. air trim.
C11	Tuning Condenser.
C12	1 mfd. paper
C13	115 mmfd. mica (A).
C14	130 mmfd. mica (H).
C15	1 mfd. paper.
C16	.1 mfd. paper.
C17	115 mmfd. mica (A).
C18	130 mmfd. mica (H).
C19	8 mfd. 450V. Electrolytic.
C20	110 mmfd. mica (L).
C21	.01 mfd. paper.
C22	25 mfd. 25V. Electrolytic.
C23	.1 mfd. paper.
C24	50 mmfd. mica (D).
C25	110 mmfd. mica (L).
C26	70 mmfd. mica (N).
C27	.5 mfd. paper.
C28	700 mmfd. mica.
C29	.02 mfd. paper.
C30	.035 mfd. paper.
C31	500 mfd. Electrolytic.
C32	8 mfd. 450V. Electrolytic.
C33	.01 mfd. paper.
C34	.02 mfd. paper (2,000V.).
C35	.02 mfd. paper (2,000V.).
C36	300 mmfd. mica.
C37	.5 mfd. paper.
C38	110 mmfd. mica (L)



SOCKET VOLTAGES (549 MV)

Valve	Bias. Voltages.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Fil. to Chassis. +	Fil. to Chassis. —
1C7G Detector ..	2.0*	50	150	0.40	4.0	2.0
Oscillator ..	—	—	65	1.50	—	—
1M5G I.F. Amplifier	0	50	150	0.25	2.0	0
6G8G Reflex Amp	2.0**	30	45*	0.90	6.0	0
1L5G Pentode ...	4.0*	150	140	10.0	6.0	4.0

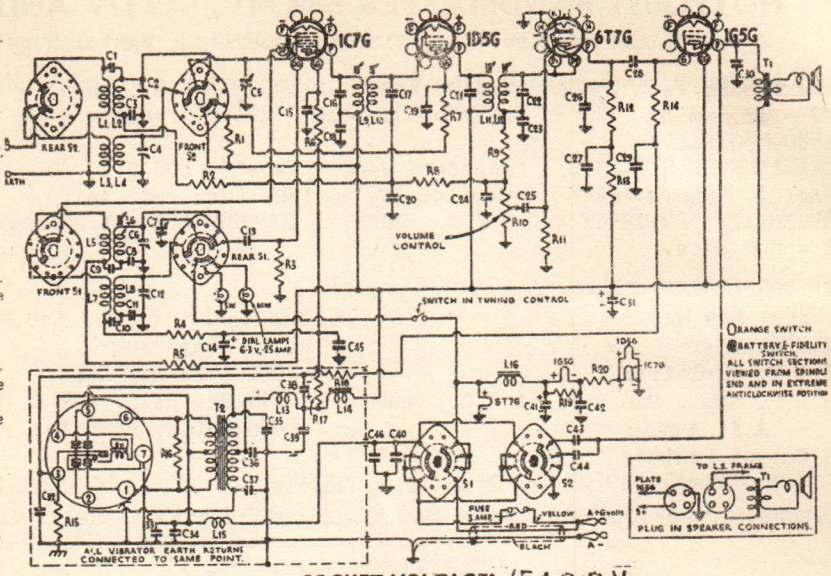
* Cannot be measured with ordinary voltmeter.

** Cathode to chassis.

Measured with no signal. Volume Control at maximum clockwise.

HOTPOINT-BANDMASTER 549 DV

R1	50,000 ohms 1 W.
R2	100,000 ohms 1/3 W.
R3	50,000 ohms 1/3 W.
R4	400 ohms 1/3 W.
R5	50,000 ohms 1 W.
R6	50,000 ohms 1 W.
R7	70,000 ohms 1 W.
R8	1.75 megohms 1/3 W.
R9	20,000 ohms 1/3 W.
R10	500,000 ohms Vol. Control.
R11	10 Meg. 1 W.
R12	250,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	500,000 ohms 1/3 W.
R15	450 ohms 3 W. wire wound.
R16	400 ohms 1/3 W.
R17	5,000 ohms 1 W.
R18	100,000 ohms 1/3 W.
R19	33 ohms 3 W. wire wound.
R20	11 ohms 3 W. wire wound.



Code No.	CONDENSERS
C1	4 mmfd. mica
C5	Tuning conderiser.
C6	17-34 mmfd. air trim.
C2	2-10 mmfd. air trim.
C3	.05 mfd. paper.
C4	2-20 mmfd. air trim.
C7	Tuning condenser.
C8	440 mmfd. mica (Padder).
C9	.05 mfd. paper.
C10	.05 mfd. paper.
C11	3,500 mmfd. mica (Padder).
C12	2-10 mmfd. air trim.
C13	110 mmfd. mica (L).
C14	20 mfd. 180V. Electrolytic.
C15	.1 mfd. paper.
C16	70 mmfd. mica (N).
C17	70 mmfd. mica (N)
C18	.1 mfd. paper.
C19	.1 mfd. paper.
C46	.5 mfd. paper.
C20	.05 mfd. paper.
C21	70 mmfd. mica (N).
C22	70 mmfd. mica (N).
C23	110 mmfd. mica (L)
C24	110 mmfd. mica (L).
C25	.02 mfd. paper.
C26	1,000 mmfd. mica.
C27	.5 mfd. paper.
C28	.02 mfd. paper.
C29	.1 mfd. paper.
C30	.0025 mfd. paper.
C31	8 mfd. 450V. Electrolytic.
C32	200 mmfd. mica (J).
C33	.5 mfd. paper.
C34	300 mmfd. mica.
C35	.01 mfd. paper.
C36	.01 mfd. paper.
C37	.01 mfd. paper.
C38	8 mfd. 450V. Electrolytic.
C39	.01 mfd. paper.
C40	1,000 mmfd. mica.
C41	500 mfd. 12V. Peak Electrolytic.
C42	.5 mfd. paper.
C43	.02 mfd. paper.
C44	.01 mfd. paper.
C45	.25 mfd. paper.

SOCKET VOLTAGES (549 D.V.

Valves.	Control Grid to Chassis. Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current. M.A.	Positive (+) Filament Volts to Chassis
1C7G Detector, M.W. ...	0	40	140	1.0	2.0
S.W. ...	0	60	140	1.3	—
Oscillator, M.W. ...	—	—	60	1.6	—
S.W. ...	—	—	120	3.4	—
1D5G I.F. Amp., M.W. ..	0	45	140	2.0	2.0
S.W. ..	0	55	140	3.0	—
6T7G 2nd Detector	0	—	50*	.3	6.0
1G5G Output	—13*	140	135	10	2.0

* Cannot be measured with ordinary voltmeter.

Measured with Volume Control at maximum clockwise. No signal input.

HOTPOINT-BANDMASTER 549 MVZ

R1	100,000 ohms 1/3 W.
R2	50,000 ohms 1/3 W.
R3	50,000 ohms 1 W.
R4	50,000 ohms 1 W.
R5	1.75 megohms 1/3 W.
R6	20,000 ohms 1/3 W.
R7	500,000 ohms Vol. Control.
R8	10 meg. 1 W.
R9	250,000 ohms 1 W.
R10	20,000 ohms 1 W.
R11	500,000 ohms 1/3 W.
R12	100,000 ohms 1/3 W.
R13	100,000 ohms Tone Control.
R14	450 ohms 3 W.
R15	400 ohms 1/3 W.
R16	33 ohms 3 W.
R17	11 ohms 3 W.
C1	4 mmfd. mica.
C2	6-14 mmfd. air trim.
C3	Tuning condenser.
C4	.05 mfd. paper.
C5	17-34 mmfd. air trim.
C6	Tuning condenser.
C7	440 mmfd. mica (Padder).
C8	.05 mfd. paper.
C9	.05 mfd. paper.
C10	70 mmfd. mica (N).
C11	70 mmfd. mica (N).
C12	.1 mfd. paper.
C13	70 mmfd. mica (N).
C14	70 mmfd. mica (N).
C15	110 mmfd. mica (L).
C16	110 mmfd. mica (L).
C17	.02 mfd. paper.
C18	1,000 mmfd. mica

SOCKET VOLTAGES (549 MVZ)

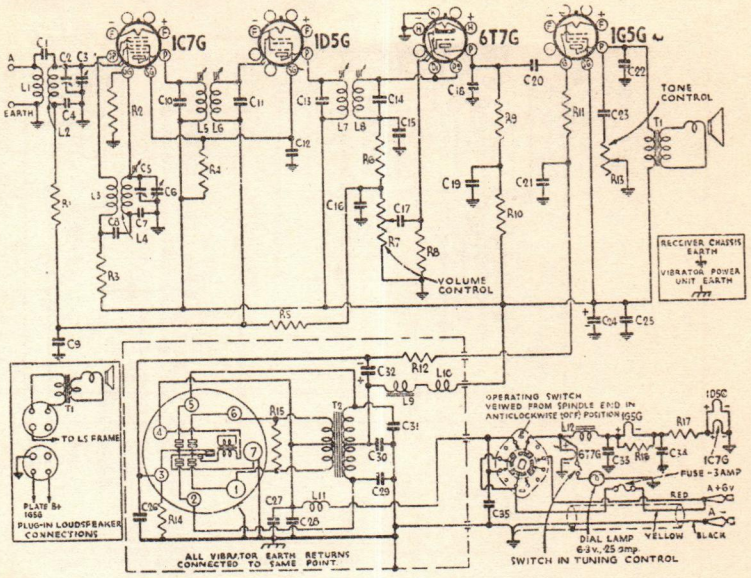
Valves.	Control Grid to Chassis. Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current. M.A.	Positive (+) Filament Volts to Chassis.
1C7G Detector	0	40	140	1.0	2.0
Oscillator	—	—	60	1.5	—
1D5G I.F. Amplifier	0	40	140	2.0	2.0
6T7G 2nd Detector	0	—	50*	.3	6.0
1G5G Pentode	—13*	140	135	10.0	6.0

* Cannot be measured with ordinary voltmeter.

Measured with no signal input. Volume Control at maximum clockwise.

MODEL 549 MVZ (Contd.)

C19	.5 mfd. paper.
C20	.02 mfd. paper.
C21	.1 mfd. paper.
C22	.0025 mfd. paper.
C23	.02 mfd. paper.
C24	8 mfd. 450V. Electrolytic.
C25	.1 mfd. paper.
C26	200 mmfd. mica (J).
C27	.5 mfd. paper.
C28	300 mmfd. mica.
C29	.01 mfd. paper.
C30	.01 mfd. paper.
C31	.01 mfd. paper.
C32	8 mfd. 450V. Electrolytic.
C33	500 mfd. 12 V.P. Electrolytic.
C34	.5 mfd. paper.
C35	.5 mfd. paper



HOTPOINT-BANDMASTER 549 MBZ AND 559 DBZ

4 and 5 Valve, one and Two Band, Battery Operated Superheterodynes

TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (559 DBZ) 13.6-43M.

R.F. ALIGNMENT SETTINGS: - "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aer.) "Short Wave" (559 DBZ) - 15M. (Osc. and Aer.)

INTERMEDIATE FREQUENCY - (559 DBZ) -

CURRENT CONSUMPTION Model 549 MVZ - "A" Battery-0.54 amps. 1.14 amps. (with dial illumination) "B" Battery - 9-11 M.A. Model 559 DBZ - "A" Battery 0.60 amps. 1.20 amps. (with dial illumination). "B" Battery - 13-15 M.A.

VALVE COMPLEMENT -

Model 549 MVZ

1C7G Converter
1D5G I.F. Amplifier
1K7G 2nd det., A.V.C. and Audio Amplifier
1L5G Output Pentode

1C7G Converter
1D5G I.F. Amplifier
1D5G I.F. Amplifier
1K7G 2nd det., A V.C. and Audio Amp.
1L5G Output Pentode

LOUDSPEAKER (Permanent Magnet). Undistorted Power Output - 350 milliwatts.

HOTPOINT-BANDMASTER 549 MVZ

R1	100,000 ohms 1/3 W.	C1	4 mmfd. mica.
R2	50,000 ohms 1/3 W.	C2	2-20 mmfd. air trim.
R3	50,000 ohms 1 W.	C3	Tuning Condenser.
R4	40,000 ohms 1 W.	C4	.05 mfd. paper.
R5	60,000 ohms 1/3 W.	C5	70 mmfd. mica (N)
R6	500,000 ohm Vol. Cont.	C6	11-29 mmfd. air trim.
R7	2.3 megs. 1/3 W.	C7	Tuning condenser.
R8	1 meg. 1 W.	C8	420 mmfd. mica (pad.
R9	1.75 meg 1/3 W.	C9	.05 mfd. paper.
R10	500,000 ohms 1/3 W.	C10	70 mmfd. mica (N)
R11	250,000 ohms 1 W.	C11	70 mmfd. mica (N)
R12	500,000 ohms 1/3 W.	C12	.1 mfd. paper.
R13	200 ohms 1 W.	C13	.05 mfd. paper.
R14	100 ohms 1 W.	C14	70 mmfd. mica (N).
R15	100,000 ohms Tone Control.	C15	70 mmfd mica (N).
R16	1.75 meg. 1/3 W	C16	110 mmfd. mica (L)
		C17	110 mmfd. mica (L)
		C18	.02 mfd. paper.
		C19	50 mmfd. mica (D).
		C20	.1 mfd. paper.
		C21	.1 mfd. paper.
		C22	.01 mfd. paper.
		C23	200 mmfd. mica (J)
		C24	.5 mfd. paper.
		C25	.0025 mfd. paper.
		C26	.035 mfd. paper.
		C27	.5 mfd. paper
		C28	.02 mfd. paper.

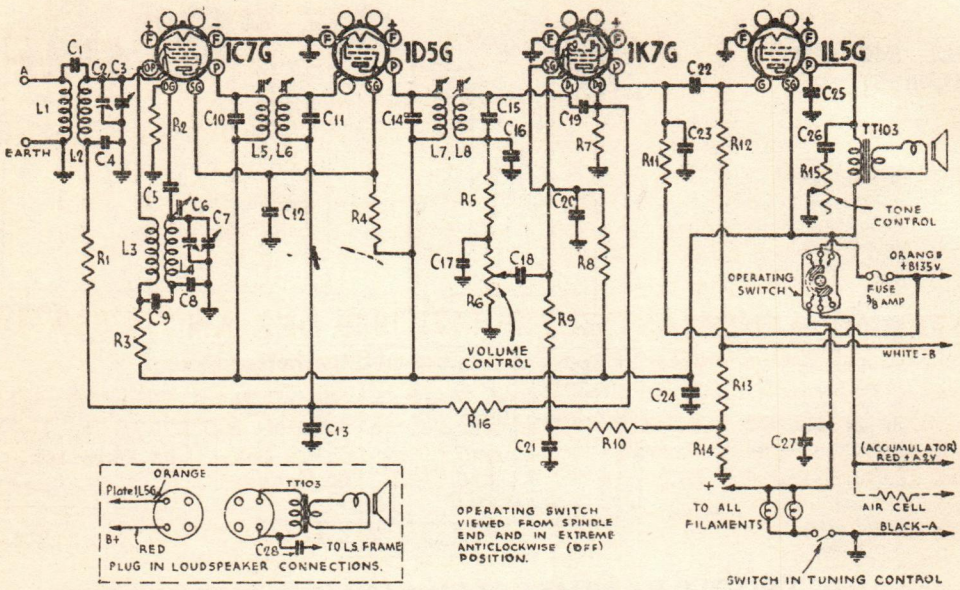
SOCKET VOLTAGES.

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1C7G Detector	0	45	130	1.4	2.0
Oscillator	—	—	60	1.2	—
1D5G I.F. Amplifier ..	0	45	130	2.6	2.0
1K7G Audio Amplifier—	-1.5*	60*	63*	0.25	2.0
1L5G Pentode	—4.5*	130	125	5.4	2.0

* Cannot be measured with ordinary voltmeter.

Measured with no signal input and volume control in the maximum clockwise position.

HOTPOINT-BANDMASTER 549 MBZ (Contd.

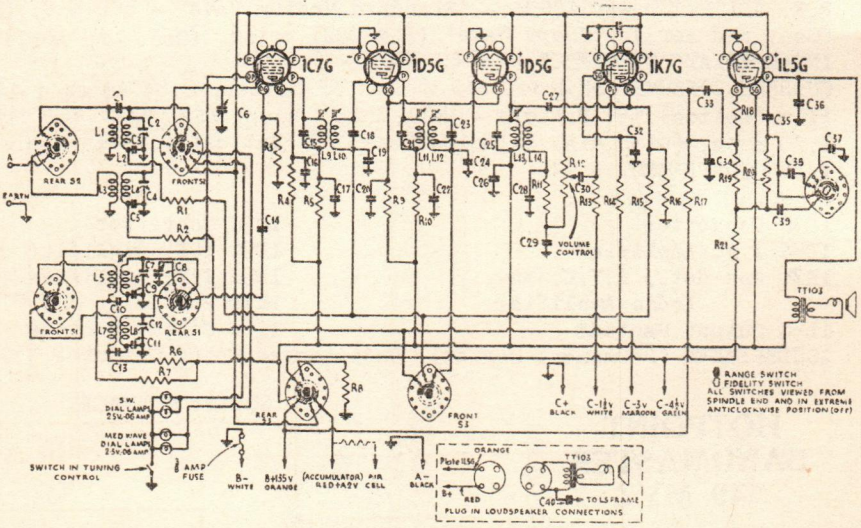


The ½ amp. fuse shown in the B+ lead in the above diagram should be in the B— lead. Although the B— lead is marked white, this refers only to the section between the fuse and the receiver chassis. The lead is black from the fuse to the "B" battery.

HOTPOINT-BANDMASTER 559 DBZ

Code No.	RESISTORS
R1	100,000 ohms 1/3 W
R2	100,000 ohms 1/3 W
R3	50,000 ohms, 1/3 W
R4	50,000 ohms 1 W.
R5	300 ohms 1/3 W.
R6	400 ohms 1/3 W.
R7	50,000 ohms 1 W.
R8	600 ohms 1 W.
R9	200,000 ohms 1 W
R10	300 ohms 1/3 W.
R11	100,000 ohms 1/3 W.
R12	500,000 ohms Vol. Control.
R13	1.75 megohms 1/3 W.
R14	1 megohm 1 W.
R15	1.75 megohms 1/3 W.
R16	1.75 megohms 1/3 W.
R17	250,000 ohms 1 W.
R18	100,000 ohms 1/3 W.
R19	390,000 ohms 1/3 W.
R20	250,000 ohms 1/3 W.
R21	50,000 ohms 1/3 W.

Code No.	CONDENSERS
C1	4 mmfd. mica.
C2	2-10 mmfd. air trim.



Although the B— lead is marked white in the above diagram, this refers only to the section between the fuse and the receiver chassis. The lead is black from the fuse to the "B" battery.

C3	.05 mfd. paper.
C4	2-20 mmfd. air trim
C5	.05 mfd. paper.
C6	Tuning Condenser.
C7	11-29 mmfd. air trim
C8	Tuning Condenser.
C9	420 mmfd. mica (padder).
C10	.05 mfd. paper.
C11	3,500 mmfd. mica (padder).
C12	2-10 mmfd. air trim.
C13	.05 mfd. paper.
C14	110 mmfd. mica (L).
C15	115 mmfd. mica (A).
C16	.1 mfd. paper.
C17	.05 mfd. paper.
C18	130 mmfd. mica (H).
C19	.02 mfd. paper.
C20	.1 mfd. paper.
C21	115 mmfd. mica (A).
C22	.05 mfd. paper.
C23	130 mmfd. mica (H).
C24	.02 mfd. paper.
C25	70 mmfd. mica (N).
C26	.5 mfd. paper.
C27	50 mmfd. mica (D).
C28	110 mmfd. mica (L).
C29	110 mmfd. mica (L).
C30	.01 mfd. paper.
C31	.5 mfd. paper.
C32	.1 mfd. paper.
C33	.01 mfd. paper.
C34	350 mmfd. mica.
C35	.05 mfd. paper.
C36	.0025 mfd. paper.
C37	2,000 mmfd. mica.
C38	700 mmfd. mica.
C39	2,000 mmfd. mica.
C40	.02 mmfd. paper.

HOTPOINT-BANDMASTER 559 DBZ (Contd.)

SOCKET VOLTAGES.

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1C7G Detector M.W.	0	45	135	1.4	2.0
S.W.	3*	55	135	1.2	—
Oscillator M.W.	—	—	65	1.3	—
S.W.	—	—	130	3.6	—
1D5G I.F. Amplifier					
M.W.	0	27	135	1.2	2.0
S.W.	0	24	135	0.9	—

Valve	Control Grid to Chassis Volts.	Screen Grid to Chassis Volts.	Plate to Chassis Volts.	Plate Current M.A.	Filament Volts.
1D5G I.F. Amplifier					
M.W.	—3*	23	135	0.2	2.0
S.W.	0	27	135	0.8	—
1K7G Detector	—1.5*	35*	65*	0.2	2.0
1L5G Pentode	- 4.5*	135	130	8.0	2.0

HOTPOINT-BANDMASTER 559 MEZ 559 DEZ AND 4/559 DEZ

5-Valve, One and Two Band, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (559 DEZ 4/559 DEZ) 13.6-43M. R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 (Osc. and Aer.). "Short Wave" (559 DEZ and 4/559 DEZ) - 15M. (Osc. and Aer.). INTERMEDIATE FREQUENCY:- 460 K.C. POWER CONSUMPTION:- 60 Watts.

VALVE COMPLEMENT -

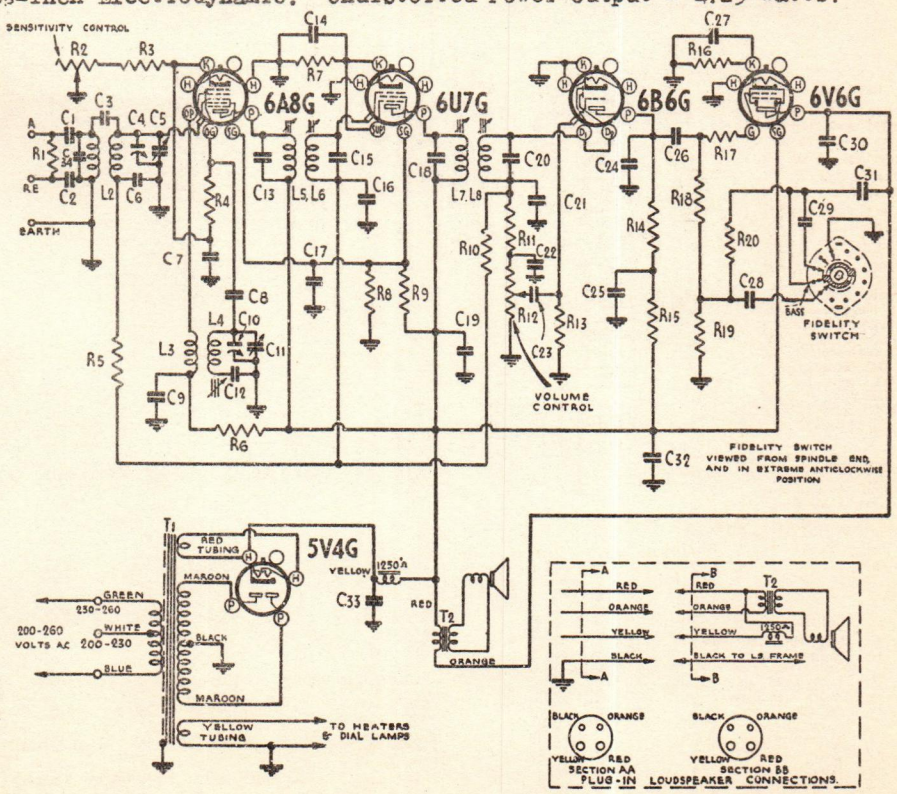
Model 559 MEZ

6A8G Freq. Converter
6U7G I.F. Amplifier
6B6G 2nd det.,A.V.C. & A.F.Amp.
6V6G Output
5V4G Rectifier

Models 559 DEZ and 4/559 DEZ

6J8G Frequency Converter
6U7G I.F.Amplifier
6B6G 2nd det.,A.V.C. & A.F. Amp.
6V6G Output
5V4G Rectifier

LOUDSPEAKER - 6½-inch Electrodynamic. Undistorted Power Output - 4.25 watts.



Code No.	RESISTORS
R1	100,000 ohms 1/3 W.
R2	1,500 ohms Sens. Control.
R3	400 ohms 1/3 W.
R4	50,000 ohms 1/3 W.
R5	100,000 ohms 1/3 W.
R6	20,000 ohms 1 W.
R7	900 ohms 1/3 W.
R8	30,000 ohms 2 W.
R9	20,000 ohms 2 W.
R10	1.75 megohms 1/3 W.
R11	60,000 ohms 1/3 W.
R12	500,000 ohms Vol. Control.
R13	10 megohms 1 W.
R14	200,000 ohms 1 W.
R15	20,000 ohms 1 W.
R16	250 ohms 3 W.
R17	50,000 ohms 1/3 W.
R18	390,000 ohms 1/3 W.
R19	50,000 ohms 1/3 W.
R20	250,000 ohms 1/3 W.

Code No.	CONDENSERS
C1	500 mmfd. mica.
C2	500 mmfd. mica.
C3	4 mmfd. mica.
C4	2-20 mmfd. air trim
C5	Tuning Condenser.
C6	.05 mfd. paper.
C7	.1 mfd. paper.
C8	70 mmfd. mica (N).
C9	.05 mfd .paper.
C10	11-29 mmfd. Air Trim.
C11	Tuning Condenser.
C12	420 mmfd. mica (Fadder).

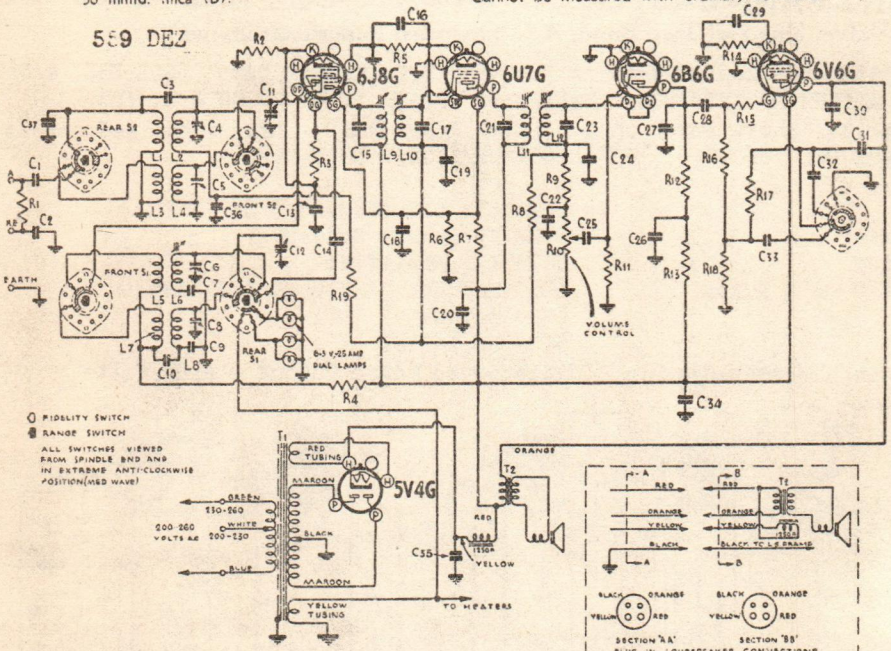
HOTPOINT-BANDMASTER 559 MEZ (Contd.)

SOCKET VOLTAGES

	Cathode to Chassis. Volts.	Screen to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater. Volts
6A8G Detector	4.0	100	250	3.0	6.3
Oscillator	—	—	180	4.0	—
6U7G I.F. Amplifier ..	5.0	100	250	4.0	6.3
6B6G 2nd Detector, A.V.C. Aud. Amp.	—	—	*132	0.6	6.3
6V6G Output	12.0	250	225	45	6.3
5V4G Rectifier	540/270 Volts, 65 M.A., total current				5.0

85 volts across Loudspeaker field.

* Cannot be measured with ordinary voltmeter.



Code No.	CONDENSERS
C1	500 mmfd. mica.
C2	500 mmfd. mica.
C3	4 mmfd. mica.
C4	2-20 mmfd. air trim.
C5	11-29 mmfd. air trim.
C6	11-29 mmfd. air trim.
C7	420 mmfd. mica (padder).
C8	2-10 mmfd. air trim.
C9	3500 mmfd. mica (padder).
C10	.05 mfd. paper.
C11	Tuning condenser.
C12	Tuning condenser.
C13	.1 mfd. paper.
C14	70 mmfd. mica (N).
C15	70 mmfd. mica (N).
C16	.1 mfd. paper.
C17	70 mmfd. mica (N).
C18	.1 mmfd. paper.
C19	.05 mfd. paper.
C20	.1 mfd. paper.
C21	70 mmfd. mica (N).
C22	110 mmfd. mica (L).
C23	70 mmfd. mica (N).
C24	110 mmfd. mica (L).
C25	.01 mfd. paper
C26	.5 mfd. paper
C27	110 mmfd. mica (L).
C28	.02 mfd. paper
C29	25 mfd. 25V. electro.
C30	.0025 mfd. paper.
C31	.05 mfd. paper.
C32	700 mmfd. mica.
C33	2000 mmfd. mica.
C34	8 mfd. 450V. electro.
C35	16 mfd. 500V. electro.
C36	.05 mfd. paper.
C37	50 mmfd. mica (D).

R1	100,000 ohms 1/3 W.
R2	400 ohms 1/3 W.
R3	30,000 ohms 1/3 W.
R4	20,000 ohms 1 W.
R5	600 ohms 1/3 W.
R6	20,000 ohms 2 W.
R7	20,000 ohms 2 W.
R8	1.75 megs. 1/3 W.
R9	60,000 ohms 1/3 W.
R10	500,000 ohms Vol. Control.
R11	10 megs. 1 W.
R12	200,000 ohms 1 W.
R13	20,000 ohms 1 W.
R14	250 ohms 3 W.
R15	50,000 ohms 1/3 W.
R16	390,000 ohms 1/3 W.
R17	250,000 ohms 1/3 W.
R18	50,000 ohms 1/3 W.
R19	100,000 ohms 1/3 W.

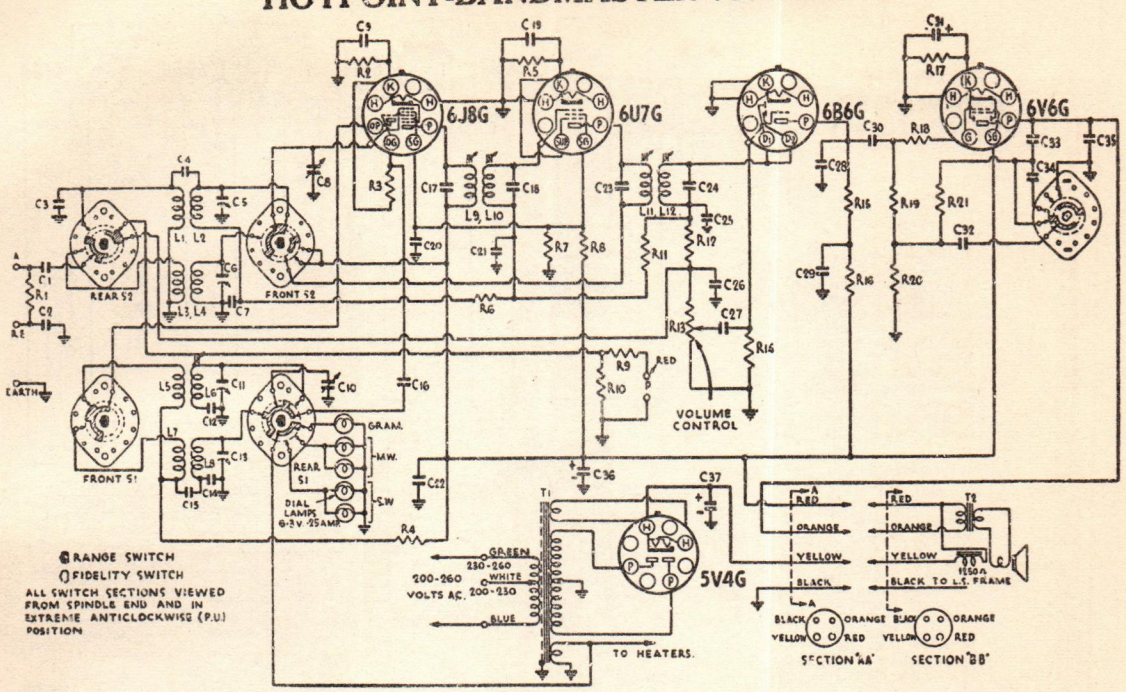
SOCKET VOLTAGES (559 MEZ and 559 DEZ

	Cathode to Chassis. Volts.	Screen to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater Volts.
6J8G Detector	3.0	100	250	1.0	6.3
Oscillator	—	—	150	5.5	—
6U7G I.F. Amplifier ..	4.0	100	250	5.0	6.3
6B6G 2nd Detector, A.V.C., Audio-Amplifier ..	—	—	*132	0.6	6.3
6V6G Output	12.0	250	225	45	6.3
5V4G Rectifier	270/540 volts, 70 M.A., total current				5.0

90 volts across Loudspeaker field.

* Cannot be measured with ordinary voltmeter.

HOTPOINT-BANDMASTER 759 ME



R1	100,000 ohms 1/3 W.	C1	500 mmfd. mica.	C21	.05 mfd. paper.
R2	400 ohms 1/3 W.	C2	500 mmfd. mica.	C22	.1 mfd. paper.
R3	30,000 ohms 1/3 W.	C3	50 mmfd. mica (D).	C23	70 mmfd. mica (N).
R4	20,000 ohms 1 W.	C4	4 mmfd. mica.	C24	70 mmfd. mica (N).
R5	600 ohms 1/3 W.	C5	2-20 mmfd. air trim.	C25	110 mmfd. mica (L).
R6	100,000 ohms 1/3 W.	C6	11-29 mmfd. air trim	C26	110 mmfd. mica (L).
R7	20,000 ohms 2 W.	C7	.05 mfd. paper.	C27	.01 mfd. paper.
R8	20,000 ohms 2 W.	C8	Tuning Condenser.	C28	110 mmfd. mica (L).
R9	50,000 ohms 1/3 W.	C9	.1 mfd. paper	C29	.5 mfd. paper.
R10	20,000 ohms 1/3 W.	C10	Tuning Condenser.	C30	.02 mfd. paper.
R11	1.75 megohms 1/3 W.	C11	11-29 mmfd. air trim	C31	25 mfd., 25V. electro-lytic.
R12	60,000 ohms 1/3 W.	C12	420 mmfd. mica (padder).	C32	2000 mmfd. mica.
R13	500,000 ohms Vol. Control.	C13	2-10 mmfd. air trim.	C33	.05 mfd. paper.
R14	10 megohm 1 W.	C14	3500 mmfd. mica (padder).	C34	700 mmfd. mica.
R15	200,000 ohms 1 W.	C15	.05 mfd. paper.	C35	.0025 mfd. paper.
R16	20,000 ohms 1 W.	C16	70 mmfd. mica (N).	C36	8 mfd. 450V. electro-lytic.
R17	250,000 ohms 3 W.	C17	70 mmfd. mica (N).	C37	16 mfd. 500V. electro-lytic.
R18	50,000 ohms 1/3 W.	C18	70 mmfd. mica (N).		
R19	390,000 ohms 1/3 W.	C19	.1 mfd. paper.		
R20	50,000 ohms 1/3 W.	C20	.1 mfd. paper.		
R21	250,000 ohms 1/3 W.				

HOTPOINT-BANDMASTER 759 ME AND 759 DE

5-Valve, One and Two Band, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (759 DE) 16-50M.

R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aerial). "Short Wave" (759 DE) - 18M. (Osc. and Aerial).

INTERMEDIATE FREQUENCY - 460 K.C.

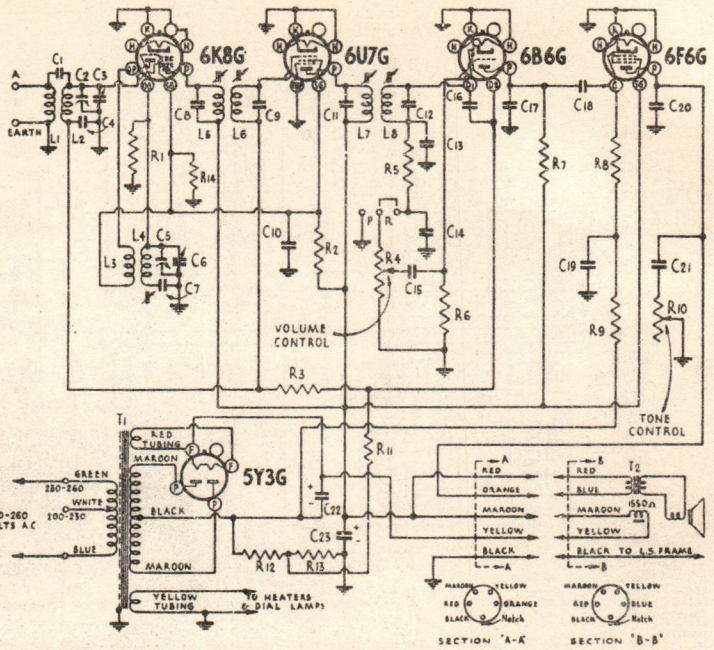
POWER CONSUMPTION - 60 Watts.

VALVE COMPLEMENT -

1. 6K8G Frequency Converter
2. 6U7G I.F. Amplifier
3. 6B6G 2nd Det., A.V.C. and A.F. Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.

LOUDSPEAKER - 12 inch Electrodynamic (Dustproof) Field Coil Resistance - 1550 ohms. UNDISTORTED POWER OUTPUT - 3 Watts.

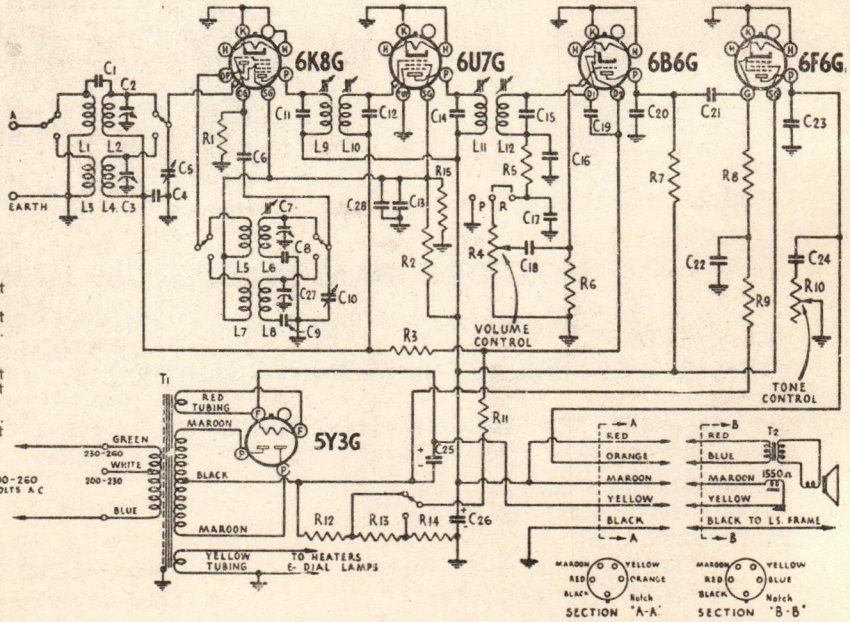
HOTPOINT-
BANDMASTER
759 ME (Contd.)



Code No.	RESISTORS
R1	50,000 ohms, 1/3 watt
R2	11,000 ohms, 3 watt
R3	1.75 megohms, 1/3 watt
R4	500,000 ohms vol. cont.
R5	20,000 ohms, 1/3 watt
R6	10 megohms, 1 watt
R7	250,000 ohms, 1 watt
R8	500,000 ohms, 1/3 watt
R9	25,000 ohms, 1/3 watt
R10	100,000 ohms tone cont.
R11	2.3 megohms, 1/3 watt
R12	250 ohms, 3 watt
R13	80 ohms, 3 watt
R14	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	6-24 mmfd. air trim.
C3	Tuning condenser
C4	.05 mfd. paper
C5	11-29 mmfd. air. trim.
C6	Tuning condenser
C7	420 mmfd. mica (pad.)
C8	70 mmfd. mica (N)
C9	70 mmfd. mica (N)
C10	.1 mfd. paper
C11	70 mmfd. mica (N)
C12	70 mmfd. mica (N)
C13	110 mmfd. mica (L)
C14	110 mmfd. mica (L)
C15	.01 mfd. paper
C16	50 mmfd. mica (D)
C17	1000 mmfd. mica
C18	.02 mfd. paper
C19	.05 mfd. paper
C20	.0025 mfd. paper
C21	.035 mfd. paper
C22	8 mfd. 500V. electro.
C23	8 mfd. 450V. electro.., with .1 mfd. paper in parallel

HOTPOINT-
BANDMASTER
759 DE (Contd.)



Code No.	RESISTORS
R1	30,000 ohms, 1/3 watt
R2	11,000 ohms, 3 watt
R3	1.75 megohms, 1/3 watt
R4	500,000 ohms vol. cont.
R5	20,000 ohms, 1/3 watt
R6	10 megohms, 1 watt
R7	250,000 ohms, 1 watt
R8	500,000 ohms, 1/3 watt
R9	25,000 ohms, 1/3 watt
R10	100,000 ohms tone cont.
R11	2.3 megohms, 1/3 watt
R12	250 ohms, 3 watt
R13	40 ohms, 3 watt
R14	40 ohms, 3 watt
R15	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-20 mmfd. air trim.
C3	8-26 mmfd. air trim.
C4	.05 mfd. paper
C5	Tuning condenser
C6	70 mmfd. mica (N)
C7	11-29 mmfd. air trim
C8	420 mmfd. mica (pad.)
C9	3500 mmfd. mica (pad.)
C10	Tuning Condenser
C11	70 mmfd. mica (N)
C12	70 mmfd. mica (N)
C13	.1 mfd. paper
C14	70 mmfd. mica (N)
C15	70 mmfd. mica (N)
C16	110 mmfd. mica (L)
C17	110 mmfd. mica (L)
C18	.01 mfd. paper
C19	50 mmfd. mica (D)
C20	1000 mmfd. mica
C21	.02 mfd. paper
C22	.05 mfd. paper
C23	.0025 mfd. paper
C24	.035 mfd. paper
C25	8 mfd. 500V. electro.
C26	8 mfd. 450V. electro., with .1 mfd. paper in parallel
C27	2-10 mmfd. air trim.
C28	8 mfd. 450V. electro.

SOCKET VOLTAGES (759 ME)

Valve.	Bias Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater Volts.
6K8G Detector	—4.7*	100	250	1.0	6.3
Oscillator	—	—	100	3.4	—
6U7G I.F. Amplifier ...	—4.7*	100	250	5.0	6.3
6B6G 2nd Detector	0	—	100*	.56	6.3
6F6G Pentode	—18*	250	232	32	6.3
5Y3G Rectifier	700/350 volts, 58 M.A. Total current				5.0

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

SOCKET VOLTAGES (759 ME).

Valve.	Bias Volts.	Screen Grid to Chassis. Volts.	Plate to Chassis. Volts.	Plate Current M.A.	Heater Volts.
6K8G Detector					
M.W.	—4.0*	100	250	1.3	6.3
S.W.	—2.4*	100	250	2.3	—
Oscillator					
M.W.	—	—	100	3.5	—
S.W.	—	—	100	3.3	—
6U7G I.F. Amplifier ...	—4.0*	100	250	5.0	6.3
	—2.4*	100	250	8.0	—
6B6G 2nd Detector ...	0	—	110*	.56	6.3
6F6G Pentode	—18*	250	232	32	6.3
5Y3G Rectifier	700/350 volts, 58 M.A. Total current				5.0

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

HOTPOINT-BANDMASTER 359 ME AND 359 MEZ

5-Valve, One Band, A.C. Operated Superheterodynes

TUNING RANGE:- "Standard Medium Wave" - 1600-550 K.C.

R.F. ALIGNMENT SETTINGS: - 600 K.C. (Osc.), 1500 K.C. (Osc. and Aerial).

INTERMEDIATE FREQUENCY - 460 K.C.

POWER CONSUMPTION - 359 ME-60 Watts, 359 MEZ-80 Watts.

VALVE COMPLEMENT -

Model 359 ME.

1. 6U7G R.F. Amplifier
2. 6K8G Frequency Converter.
3. 6G8G I.F. Amp, 2nd det., A.V.C. and A.F. Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.

6U5 Visual Tuning Indicator.

Model 359 MEZ

1. 6A8G Frequency Converter
2. 6U7G I.F. Amplifier
3. 6B8G 2nd det., A.V.C. and A.F.Amp.
4. 6V6G Output
5. 5V4G Rectifier

6U5 Visual Tuning Indicator

LOUDSPEAKER - 12 inch Electrodynamic (Dustproof)

Field Coil Resistance - 1550 ohms - 359 ME, 1700 ohms - 359 MEZ.

UNDISTORTED POWER OUTPUT - 3 watts - 359 ME, 4.2 watts - 359 MEZ.

SOCKET VOLTAGES (359 ME)

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amplifier	3†	100	248	5.75	6.3
6K8G Detector	3†	100	248	1.3	6.3
Oscillator	—	—	100	3.3	—
6C8G Reflex	1.3†	20*	180*	0.4	6.3
6F6G Pentode	—17.0‡	248	230	32	6.3
5Y3G Rectifier	700/350 volts, 65 M.A. Total current.				5.0

Voltage across loudspeaker field, 100 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Voltages measured at 240 volts A.C. supply. No signal input. Volume control at maximum clockwise.

SOCKET VOLTAGES (359 ME).

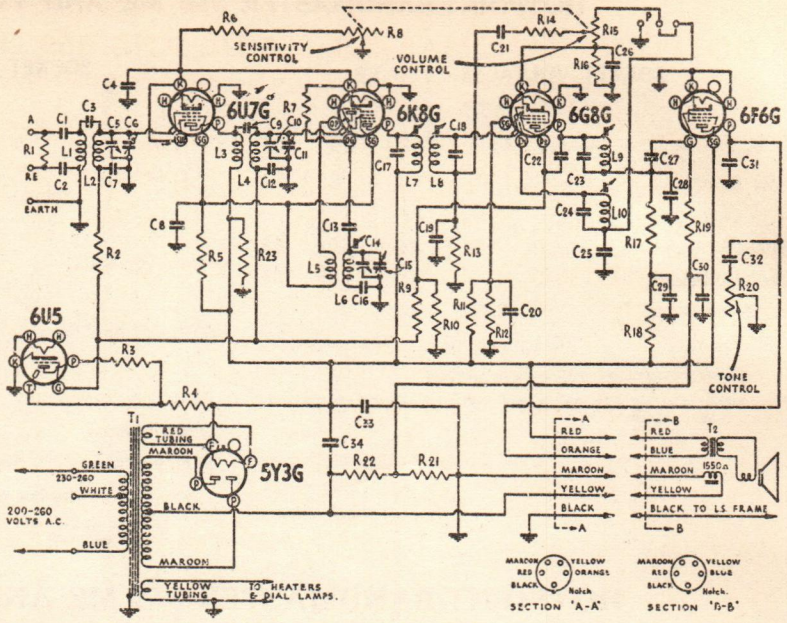
Valve	Cathode Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	4.0	100	265	3.0	6.3
Oscillator	—	—	170	4.5	—
6U7G I.F. Amplifier	5.25	100	250	5.5	6.3
6B8G Detector	1.0	35*	135*	0.5	6.3
6V6G Output	12.5	265	253	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. Total current.				5.0

Voltage across loudspeaker field, 160 volts.

* Cannot be measured with ordinary voltmeter.

Voltages measured at 240 volts A.C. supply. No signal input. Volume control at maximum clockwise.

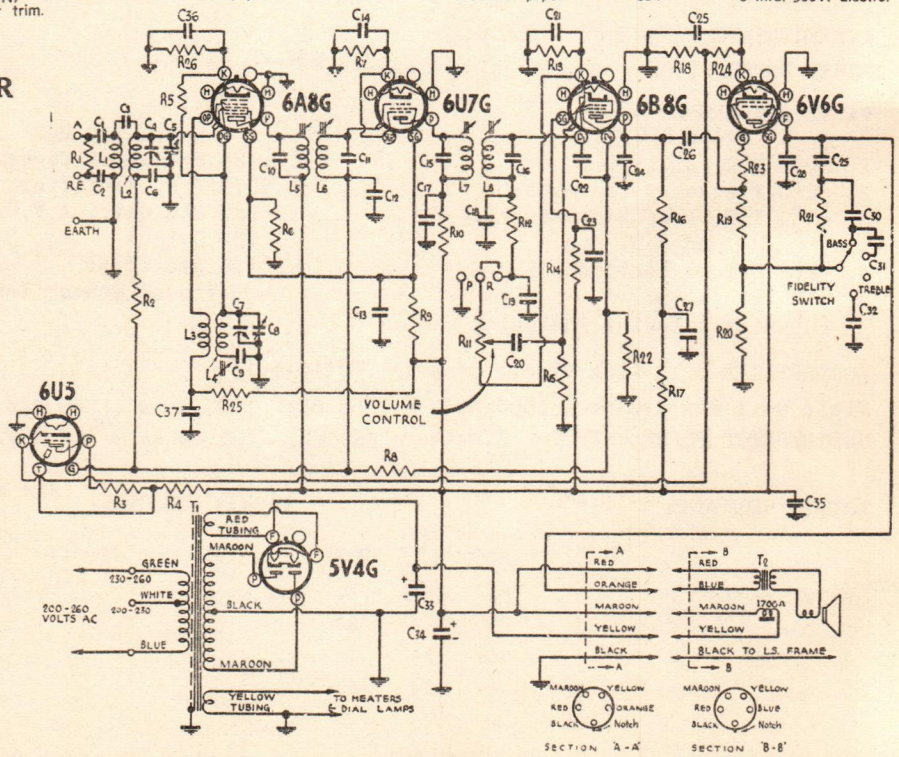
HOTPOINT-BANDMASTER 359 ME



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	20,000 ohms, 1 watt
R5	11,000 ohms, 3 watt
R6	200 ohms, 1/3 watt
R7	50,000 ohms, 1/3 watt
R8	3000 ohms Sens. Cont.
R9	1.75 megohms, 1/3 watt
R10	2.3 megohms, 1/3 watt
R11	1 megohm, 1 watt
R12	100,000 ohms, 1 watt
R13	2.3 megohms, 1/3 watt
R14	500,000 ohms, 1/3 watt
R15	500,000 ohms Vol. Cont.
R16	3000 ohms, 1/3 watt
R17	150,000 ohms, 1 watt
R18	20,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	100,000 ohms Tone Cont.
R21	20,000 ohms, 1 watt
R22	100,000 ohms, 1 watt
R23	20,000 ohms, 1 watt

Code No	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	.1 mfd. paper
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.1 mfd. paper
C9	4 mmfd. mica
C10	2-20 mmfd. air trim.
C11	Tuning Condenser
C12	.05 mfd. paper
C13	70 mmfd. mica (N)
C14	11-29 mmfd. air trim.
C15	Tuning Condenser
C16	420 mmfd. mica (padder)
C17	70 mmfd. mica (N)
C18	70 mmfd. mica (N)
C19	110 mmfd. mica (L)
C20	.1 mfd. paper
C21	.01 mfd. paper
C22	50 mmfd. mica (D)
C23	70 mmfd. mica (N)
C24	70 mmfd. mica (N)
C25	110 mmfd. mica (L)
C26	25 mfd. 25V. Electro.
C27	.02 mfd. paper
C28	700 mmfd. mica
C29	.5 mfd. paper
C30	25 mfd. 25V. Electro.
C31	.0025 mfd. paper
C32	.035 mfd. paper
C33	8 mfd. 450V. Electro.
C34	8 mfd. 500V. Electro.

HOTPOINT-BANDMASTER 359 MEZ



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	20,000 ohms, 1 watt
R5	50,000 ohms, 1/3 watt
R6	20,000 ohms, 2 watt
R7	800 ohms, 1/3 watt
R8	1.75 megohms, 1/3 watt
R9	11,000 ohms, 3 watt
R10	3,000 ohms, 1 watt
R11	500,000 ohms, Vol. Cont.
R12	20,000 ohms, 1/3 watt
R13	2,000 ohms, 1/3 watt
R14	3 megohms, 1 watt
R15	1.75 megohms, 1/3
R16	250,000 ohms, 1/
R17	20,000 ohms, 1
R18	50 ohms, 3 watt
R19	390,000 ohms, 1/3
R20	50,000 ohms, 1/3
R21	250,000 ohms, 1/3
R22	2.3 megohms, 1/3
R23	50,000 ohms, 1/3
R24	200 ohms, 3 watt
R25	20,000 ohms, 1 watt
R26	350 ohms, 1/3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	Tuning condenser
C6	.05 mfd. paper
C7	11-29 mmfd. air trim.
C8	Tuning condenser
C9	420 mmfd. mica (pad.)
C10	70 mmfd. mica (N)
C11	70 mmfd. mica (N)
C12	.05 mfd. paper
C13	.1 mfd. paper
C14	.1 mfd. paper
C15	70 mmfd. mica (N)
C16	70 mmfd. mica (N)
C17	.05 mfd. paper
C18	110 mmfd. mica (L)
C19	110 mmfd mica (L)
C20	.01 mfd. paper
C21	25 mfd. 25V. electro.
C22	50 mmfd. mica (D)
C23	.1 mfd. paper
C24	110 mmfd. mica (L)
C25	25 mfd. 25V. electro.
C26	.02 mfd. paper
C27	.5 mfd. paper
C28	.0025 mfd. paper
C29	.05 mfd. paper
C30	1500 mmfd. mica
C31	700 mmfd. mica
C32	2000 mmfd. mica
C33	16 mfd. 500V. electro.
C34	16 mfd. 500V. electro.
C35	.1 mfd. paper
C36	.05 mfd. paper
C37	.1 mfd. paper

HOTPOINT-BANDMASTER 359 DE AND 359 DEZ 369 DE

5 and 6-Valve, Two Band, A.C. Operated Superheterodynes

TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (359-DE 369-DE) - 16-50M. "Short Wave" (359-DEZ) - 13.65-46M.
R F. ALIGNMENT SETTINGS:- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc. R.F., Aerial). "Short Wave" (359-DE and 369-D E) - 18M. (Osc., R.F., Aerial). "Short Wave" (359-DEZ) - 15M. (Osc. and Aerial).
INTERMEDIATE FREQUENCY - 460 K.C. POWER CONSUMPTION -359DE - 60 watts, 359-DEZ - 80 watts, 369-DE - 65 watts.
VALVE COMPLEMENT

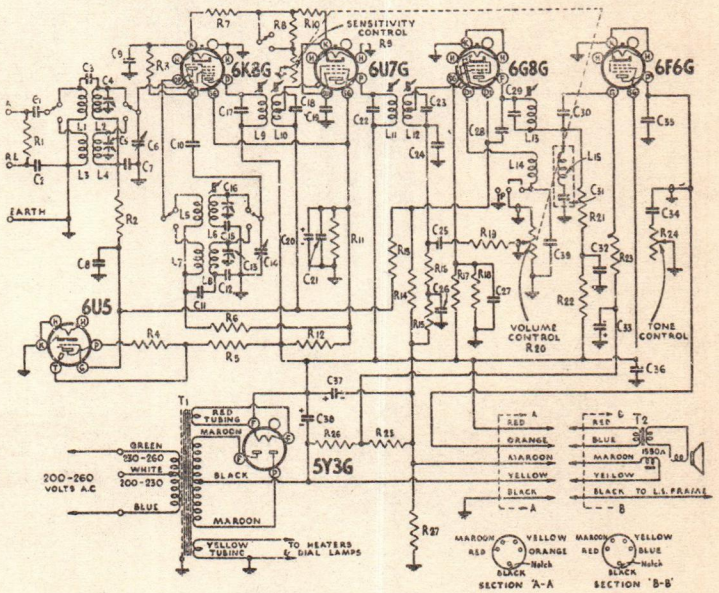
1. 6K8G Frequency Converter	1. 6A8G Freouency Converter.	1. 6U7G R.F. Amplifier
2. 6U7G I.F. Amplifier	2. 6U7G I.F. Amplifier	2. 6K8G Freq. Convert/
3. 6G8G I.F. Amp.,2nd Det., A.V.C. & A.F. Amp.	3. 6B8G 2nd dét.,A.V.C. & A.F. Amp.	3. 6U7G I.F. Amplifier
4. 6F6G Output Pentode	4. 6V6G Output	4. 6G8G 2nd Det.,A.V.C. & A.F. Amp.
5. 5Y3G Rectifier	5. 5V4G Rectifier	5. 6F6G Output Pentode
6U5 Visual Tuning Ind.	6U5 Visual Tuning Ind.	6U5 Visual Tuning Ind.

LOUDSPEAKER - 12 inch electrodynamic (dustproof).

Field Coil Resistance - 1550 ohms - 359-DE and 369-DE, 1700 ohms - 359-DEZ.

UNDISTORTED POWER OUTPUT - 3 watts - 359-DE and 369-DE, 4.2 watts - 359-DEZ.

HOTPOINT-BANDMASTER 359 DE



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	50,000 ohms, 1/3 watt
R4	1 megohm, 1 watt
R5	20,000 ohms, 1 watt
R6	600 ohms, 1/3 watt
R7	200 ohms, 1/3 watt
R8	100 ohms, 1/3 watt
R9	3000 ohms sens. cont.
R10	200 ohms, 1/3 watt
R11	20,000 ohms, 1 watt
R12	11,000 ohms, 3 watt
R13	1.75 megs., 1/3 watt
R14	2.3 megohms, 1/3 watt
R15	300,000 ohms, 1/3 watt
R16	2.3 megohms, 1/3 watt
R17	1 megohm, 1 watt
R18	100,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	500,000 ohms Vol. Cont.
R21	150,000 ohms, 1 watt
R22	20,000 ohms, 1 watt
R23	500,000 ohms, 1/3 watt
R24	100,000 ohms Tone Cont.
R25	20,000 ohms, 1 watt
R26	100,000 ohms, 1 watt
R27	20 ohms, 3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.05 mfd. paper
C9	.05 mfd. paper
C10	70 mmfd. mica (N)
C11	.05 mfd. paper
C12	3500 mmfd. mica (pad.)
C13	2-10 mmfd. air trim.
C14	Tuning Condenser
C15	420 mmfd. mica (pad.)
C16	11-29 mmfd. air trim.
C17	115 mmfd. mica (A)
C18	130 mmfd. mica (H)
C19	.05 mfd. paper
C20	8 mfd. 450V. electro.
C21	.1 mfd. paper
C22	115 mmfd. mica (A)
C23	130 mmfd. mica (H)
C24	110 mmfd. mica (L)
C25	.01 mfd. paper
C26	.1 mfd. paper
C27	.1 mfd. paper
C28	50 mmfd. mica (D)
C29	70 mmfd. mica (N)
C30	.02 mfd. paper
C31	115 mmfd. mica (A)
C32	.5 mfd. paper
C33	25 mfd. 25V. electro.
C34	.035 mfd. paper
C35	.0025 mfd. paper
C36	.1 mfd. paper
C37	16 mfd. 500V. electro.
C38	16 mfd. 500V. electro.
C39	110 mmfd. mica (L)

SOCKET VOLTAGES (359DE).

Valve	Bias Voltages		Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector						
M.W.	—1.4‡	3.4†	100	250	1.5	6.3
S.W.	—1.4‡	1.8†	100	250	2.0	—
Oscillator	—	—	—	100	2.5	—
6U7G I.F. Amp.						
M.W.	—1.4‡	3.2†	100	250	6.0	6.3
S.W.	—1.4‡	1.8†	100	250	7.5	—
6C8G Reflex Amp.	— 1.4		18*	165*	0.5	6.3
6F6G Pentode	—17.0		250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 M.A. Total Current.					5.0

Voltage across loudspeaker field, 100 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control Grid to Chassis. Cannot be measured with ordinary voltmeter.

† Cathode to Chassis.

Measured at 240 volts A.C. supply. No signal input. Volume Control at maximum.

SOCKET VOLTAGES (359DEZ).

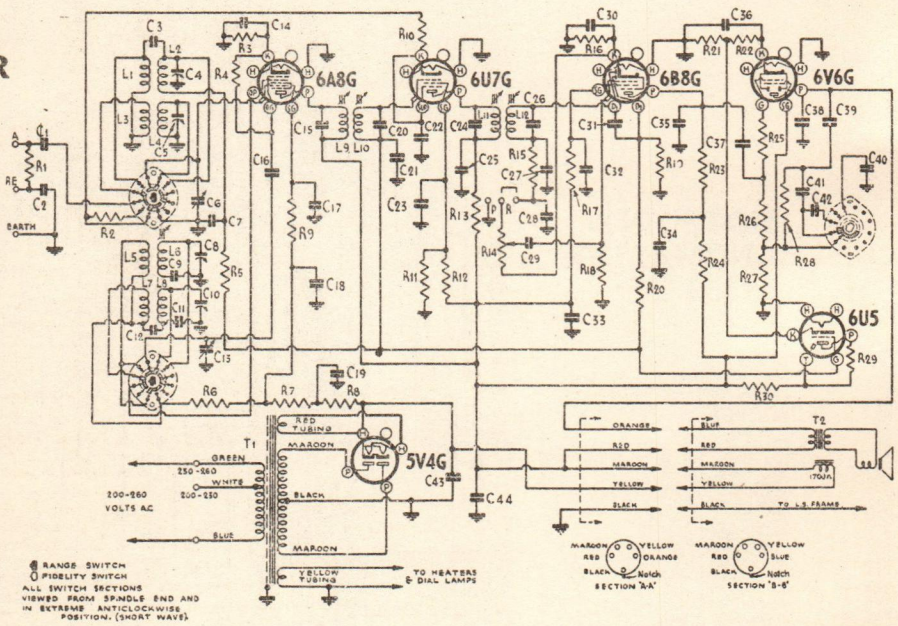
Valve	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	5.0	100	268	3.5	6.3
Oscillator	—	—	150	5.0	—
6U7G I.F. Amp.					
M.W.	5.8	100	250	5.0	6.3
S.W.	4.0	100	243	7.0	—
6B8G 2nd Det.	1.0	35*	135*	0.45	6.3
6V6G Output	12.5	268	255	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. Total Current.				5.0

Voltage across loudspeaker field, 150 volts.

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input. Volume Control at maximum.

HOTPOINT-BANDMASTER 359 DEZ



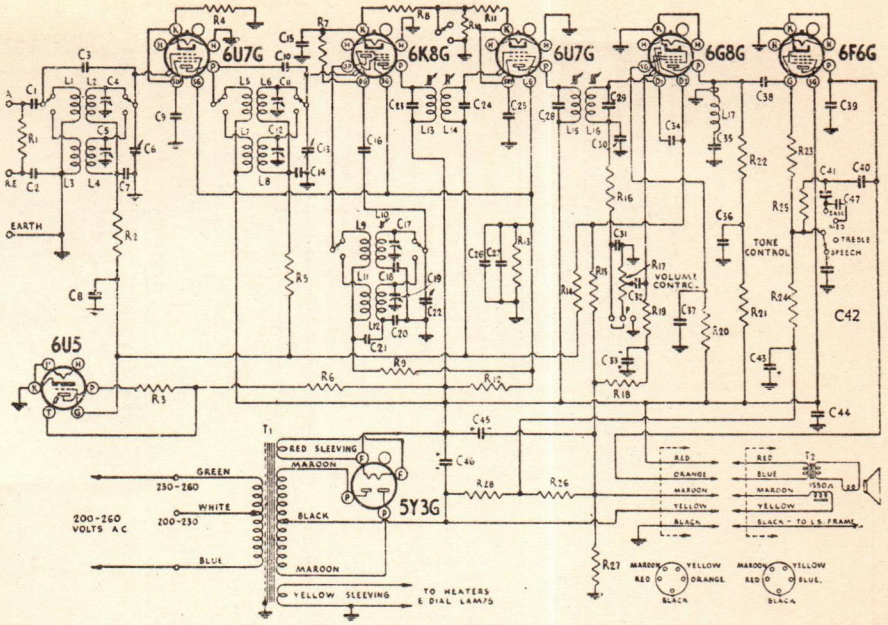
Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	400 ohms, 1/3 watt
R3	400 ohms, 1/3 watt
R4	50,000 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	10,000 ohms, 1 watt
R7	10,000 ohms, 1 watt
R8	10,000 ohms, 1 watt
R9	50,000 ohms, 1 watt
R10	400 ohms, 1/3 watt
R11	10,000 ohms, 2 watt
R12	14,000 ohms, 3 watt
R13	3,000 ohms, 1 watt
R14	500,000 ohms Vol. Cont.
R15	20,000 ohms 1/3 watt
R16	2,000 ohms, 1/3 watt
R17	3 meg., 1 watt
R18	1.75 megs., 1/3 watt
R19	2.3 megs., 1/3 watt
R20	1.75 megs., 1/3 watt
R21	50 ohms, 3 watt
R22	200 ohms, 3 watt
R23	250,000 ohms, 1 watt
R24	20,000 ohms, 1 watt
R25	50,000 ohms, 1/3 watt
R26	390,000 ohms, 1/3 watt
R27	50,000 ohms, 1/3 watt
R28	250,000 ohms, 1/3 watt
R29	1 meg., 1 watt
R30	20,000 ohms, 1 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	11-29 mmfd. air trim.
C9	440 mmfd. (padder)
C10	2-10 mmfd. air trim.
C11	3500 mmfd. mica (pad.)
C12	.05 mfd. paper
C13	Tuning Condenser
C14	.05 mfd. paper
C15	70 mmfd. mica (N)
C16	70 mmfd. mica (N)
C17	.1 mfd. paper
C18	8 mfd. 450V. electro
C19	8 mfd. 450V. electro.
C20	79 mmfd. mica
C21	.05 mfd. paper
C22	.1 mfd. paper
C23	.1 mfd. paper
C24	70 mmfd. mica (N)
C25	.05 mfd. paper
C26	70 mmfd. mica (N)
C27	110 mmfd. mica (L)
C28	110 mmfd. mica (L)
C29	.01 mfd. paper
C30	25 mfd. 25V. electro.
C31	50 mmfd. mica (D)
C32	.1 mfd. paper
C33	.1 mfd. paper
C34	.5 mfd. paper
C35	110 mmfd. mica (L)
C36	25 mfd. 25V. electro
C37	.02 mfd. paper
C38	.0025 mfd. paper
C39	.05 mfd. paper
C40	2000 mmfd. mica
C41	1500 mmfd. mica
C42	700 mmfd. mica
C43	16 mfd. 500V. electro.
C44	16 mfd. 500V. electro.

HOTPOINT-BANDMASTER 369 DE

Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm. 1 watt
R4	200 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	20,000 ohms, 1 watt
R7	50,000 ohms, 1/3 watt
R8	200 ohms, 1/3 watt
R9	600 ohms, 1/3 watt
R10	300 ohms, 1/3 watt
R11	200 ohms, 1/3 watt
R12	11,000 ohms, 3 watt
R13	20,000 ohms, 1 watt
R14	1.75 megs., 1/3 watt
R15	2.3 megs., 1/3 watt
R16	20,000 ohms, 1/3 watt
R17	500,000 ohms Vol. Cont.
R18	300,000 ohms, 1/3 watt
R19	2.3 megohms, 1/3 watt
R20	1 megohm, 1 watt
R21	20,000 ohms, 1 watt
R22	200,000 ohms, 1 watt
R23	400,000 ohms, 1/3 watt
R24	50,000 ohms, 1/3 watt
R25	250,000 ohms, 1/3 watt
R26	20,000 ohms, 1 watt
R27	20 ohms, 3 watt
R28	100,000 ohms, 1 watt

Code No.	CONDENSERS.
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.05 mfd. paper
C8	.05 mfd. paper
C9	.1 mfd. paper
C10	4 mmfd. mica
C11	2-20 mmfd. air trim.
C12	2-20 mmfd. air trim.
C13	Tuning Condenser
C14	.05 mfd. paper
C15	.05 mfd. paper
C16	70 mmfd. mica (N)
C17	11-29 mmfd. air trim.
C18	420 mmfd. mica (pad.)
C19	2-10 mmfd. air trim.
C20	3,500 mmfd. mica (padder)
C21	.05 mfd. paper
C22	Tuning Condenser
C23	70 mmfd. mica (N)
C24	79 mmfd. mica
C25	.05 mfd. paper
C26	8 mfd. 450V. electro.
C27	.1 mfd. paper
C28	70 mmfd. mica (N)
C29	70 mmfd. mica (N)
C30	110 mmfd. mica (L)
C31	110 mmfd. mica (L)
C32	.02 mfd. paper
C33	25 mfd. 25V. electro.
C34	50 mmfd. mica (D)
C35	115 mmfd. mica (A)
C36	.5 mfd. paper
C37	.1 mfd. paper
C38	.02 mfd. paper
C39	.0025 mfd. paper
C40	.05 mfd. paper
C41	1000 mmfd. mica
C42	2000 mmfd. mica
C43	25 mfd. 25V. electro.
C44	.1 mfd. paper
C45	16 mfd. 500V. electro.
C46	16 mfd. 500V. electro.
C47	700 mmfd. mica



Valve	Bias Voltages		Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amp.	—1.3‡	1.5†	90	260	7.25	6.3
6K8G Detector	—1.3‡	5.5†	90	260	2.0	6.3
Oscillator	—	—	—	90	3.5	—
6U7G I.F. Amp.	—1.3‡	4.5†	90	260	5.0	6.3
6G8G 2nd Det.	—1.3‡		20*	40*	0.95	6.3
6F6G Output	—16.5‡		260	248	30.0	6.3
5Y3G Rectifier	710/355 volts, 63 M.A. Total Current.					5.0

Voltage across loudspeaker field, 110 volts.

* Cannot be measured with ordinary voltmeter.

‡ Control Grid to Chassis. Cannot be measured with ordinary voltmeter.

† Cathode to Chassis.

Measured at 240 volts A.C. supply. No signal input.
Volume and Fidelity Controls in extreme clockwise positions.

HOTPOINT-BANDMASTER 749 MB-V, 759 MB-V AND 359 DB-V

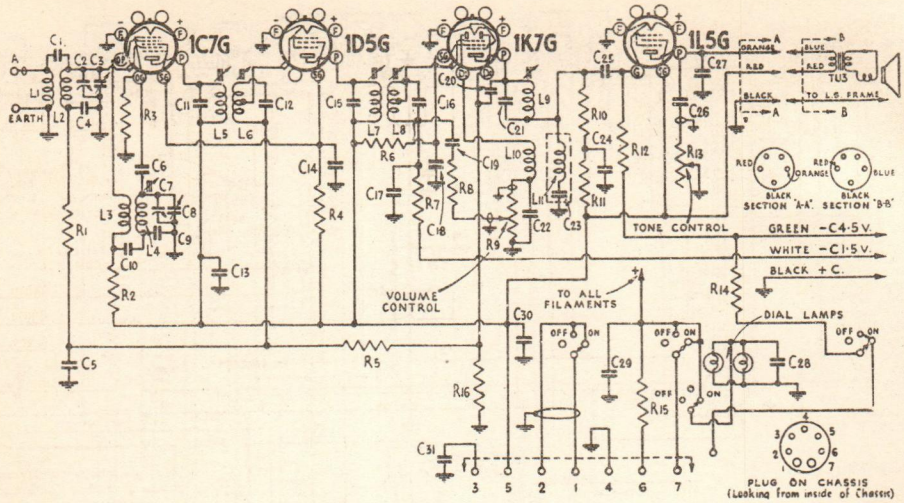
4 and 5-Valve, One and Two Band, Battery Operated Superheterodynes

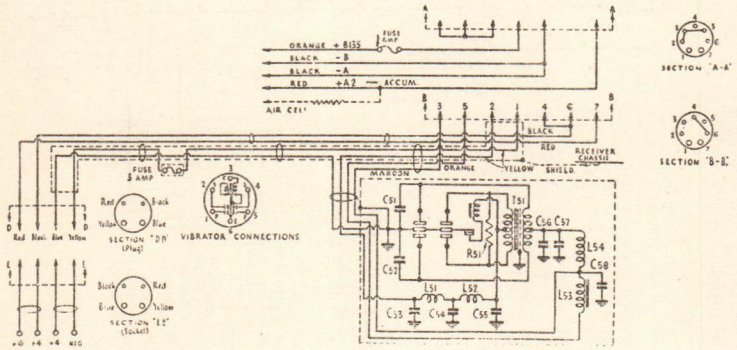
TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" (359 DB-V) - 16-50M. R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave," - 600 K.C. (Osc.), 1500 K.C. (Osc., R.F., Aer.). "Short Wave" (359 DB-V) - 18M. (Osc., R. F., Aer.).
INTERMEDIATE FREQ.- 460 K.C.

CURRENT CONSUMPTION	"B" BATTERY OPERATION	VIBRATOR OPERATION
"A" Battery at 2 volts (749 MB-V	0.54 Amp.	
"A" Battery at 2 volts (759 MB-V 359 DB-V)	0.60 Amp.	
"A" Battery 6 volts		1.2 Amps
"B" Battery at 135 volts (749 MB-V)	14 M.A.	(Supplied from Vibrator power Unit)
"B" Battery at 135 volts (759 MB-V 359 DB-V)	17 M.A.	" " " "
REPLACEMENT FUSE	3/8 Amp.	3 Amp.

VALVE COMPLEMENT Model 749 MB-V - 1C7G Freq. Converter. 1D5G I.F. Amp. 1K7G I.F. Amp. 2nd Det., A.V.C. & A.F.Amp. 1L5G Output Pentode 759 MB-V and 359 MB-V - 1D5G R.F. Amp. 1C7G Freq. Conv. 1D5G I.F.Amp. 1K7G 2nd det.A.V.C.&A.F.Amp. 1L5G Output Pentode.
LOUDSPEAKER - (Permanent Magnet) UNDISTORTED POWER OUTPUT - 350 milliwatts.

HOTPOINT-BANDMASTER 749 MB-V





R3	60,000 ohms, 1/3 watt	C2	2-10 mmfd. air trim.	C21	70 mmfd. mica (N)
R4	70,000 ohms, 1 watt	C3	Tuning Condenser	C22	110 mmfd. mica (L)
R5	1.75 megs., 1/3 watt	C4	.05 mfd. paper	C23	700 mmfd. mica
R6	500,000 ohms, 1 watt	C5	.05 mfd. paper	C24	.5 mfd. paper
R7	1.75 megs., 1/3 watt	C6	110 mmfd. mica (L)	C25	.05 mfd. paper
R8	500,000 ohms, 1/3 watt	C7	11-29 mmfd. air trim.	C26	.035 mfd. paper
R9	500,000 ohms Vol. Cont.	C8	Tuning Condenser	C27	.0025 mfd. paper
R10	100,000 ohms, 1 watt	C9	420 mmfd. mica (pad)	C28	.5 mfd. paper
R11	20,000 ohms, 1 watt	C10	.05 mfd. paper	C29	450 mmfd. mica
R12	500,000 ohms, 1/3 watt	C11	115 mmfd. mica (A)	C30	8 mfd. 450V. Electro
R13	100,000 ohms Tone Cont.	C12	130 mmfd. mica (H)	C31	450 mmfd. mica
R14	750 ohms, 1 watt	C13	.1 mfd. paper	C51	.01 mfd. paper
R15	4.5 ohms wire wound	C14	.1 mfd. paper	C52	.01 mfd. paper
R16	2.3 megs., 1/3 watt	C15	115 mmfd. mica (A)	C53	.1 mfd. paper
R51	400 ohms, 1/3 watt	C16	130 mmfd. mica (H)	C54	.25 mfd. paper
Code No.	CONDENSERS	C17	110 mmfd. mica (L)	C55	.25 mfd. paper
C1	4 mmfd. mica	C18	.1 mfd. paper	C56	8 mfd., 450V. Electro
		C19	.02 mfd. paper	C57	.02 mfd. paper
		C20	50 mmfd. mica (D)	C58	.5 mfd. paper

SOCKET VOLTAGES (749 MB-V).

Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G Det. Oscillator	0	35	135	1.0	2.0
1D5G I.F. Amplifier .	—	—	60	1.5	—
1K7G Reflex Amp. .	—1.5*	60*	85*	0.4	2.0
1L5G Pentode	—4.5*	135	130	6.5	2.0

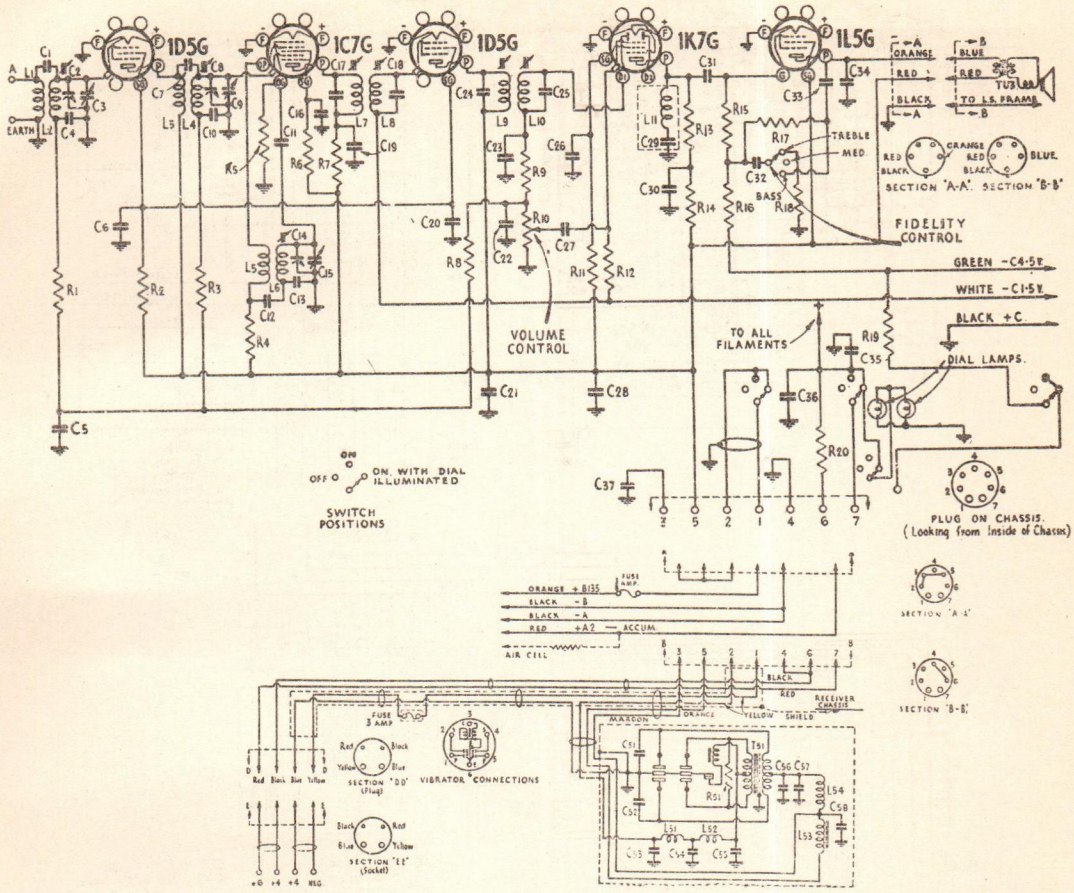
* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

SOCKET VOLTAGES (185).

Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier	—	32	135	1.2	2.0
1C7G Detector	—	55	135	3.0	2.0
Oscillator	—	—	48	1.3	—
1D5G I.F. Amplifier .	—1.5*	32	135	.76	2.0
1K7G 2nd Detector .	—1.5*	35*	65*	.25	2.0
1L5G Pentode	—4.5*	135	130	7	2.0

* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

HOTPOINT-BANDMASTER 759 MB-V



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	150,000 ohms, 1 watt
R3	100,000 ohms, 1/3 watt
R4	50,000 ohms, 1 watt
R5	60,000 ohms, 1/3 watt
R6	40,000 ohms, 1 watt
R7	300 ohms, 1/3 watt
R8	1.75 megohms, 1/3 watt
R9	50,000 ohms, 1/3 watt
R10	500,000 ohms Vol. Cont.
R11	1 megohm, 1 watt
R12	1.75 megs., 1/3 watt
R13	200,000 ohms, 1 watt
R14	50,000 ohms, 1 watt
R15	400,000 ohms, 1/3 watt
R16	100,000 ohms, 1/3 watt
R17	200,000 ohms, 1/3 watt
R18	15,000 ohms, 1/3 watt
R19	600 ohms, 1 watt
R20	4.5 ohms wire wound
R51	400 ohms, 1/3 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-20 mmfd. air trim
C3	Tuning Condenser
C4	.05 mfd. paper
C5	.05 mfd. paper
C6	.1 mfd. paper
C7	4 mmfd. mica
C8	2-20 mmfd. air trim
C9	Tuning Condenser
C10	.05 mfd. paper
C11	110 mmfd. mica (L)
C12	.05 mfd. paper
C13	420 mmfd. mica (pad.)
C14	11-29 mmfd. air trim.
C15	Tuning Condenser
C16	.1 mfd. paper
C17	70 mmfd. mica (N)
C18	70 mmfd. mica (N)
C19	.1 mfd. paper
C20	.1 mfd. paper
C21	8 mfd. 450V. Electro
C22	110 mmfd. mica (L)
C23	110 mmfd. mica (L)
C24	70 mmfd. mica (N)
C25	70 mmfd. mica (N)
C26	.1 mfd. paper
C27	.01 mfd. paper
C28	.1 mfd. paper
C29	115 mmfd. mica (A)
C30	.5 mfd. paper
C31	.02 mfd. paper
C32	.002 mfd. paper
C33	.05 mfd. paper
C34	.0025 mfd. paper
C35	450 mmfd. mica
C36	.5 mfd. paper
C37	450 mmfd. mica
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd. 450V. Electro
C57	.02 mfd. paper
C58	.5 mfd. paper

SOCKET VOLTAGES 359 DB-V

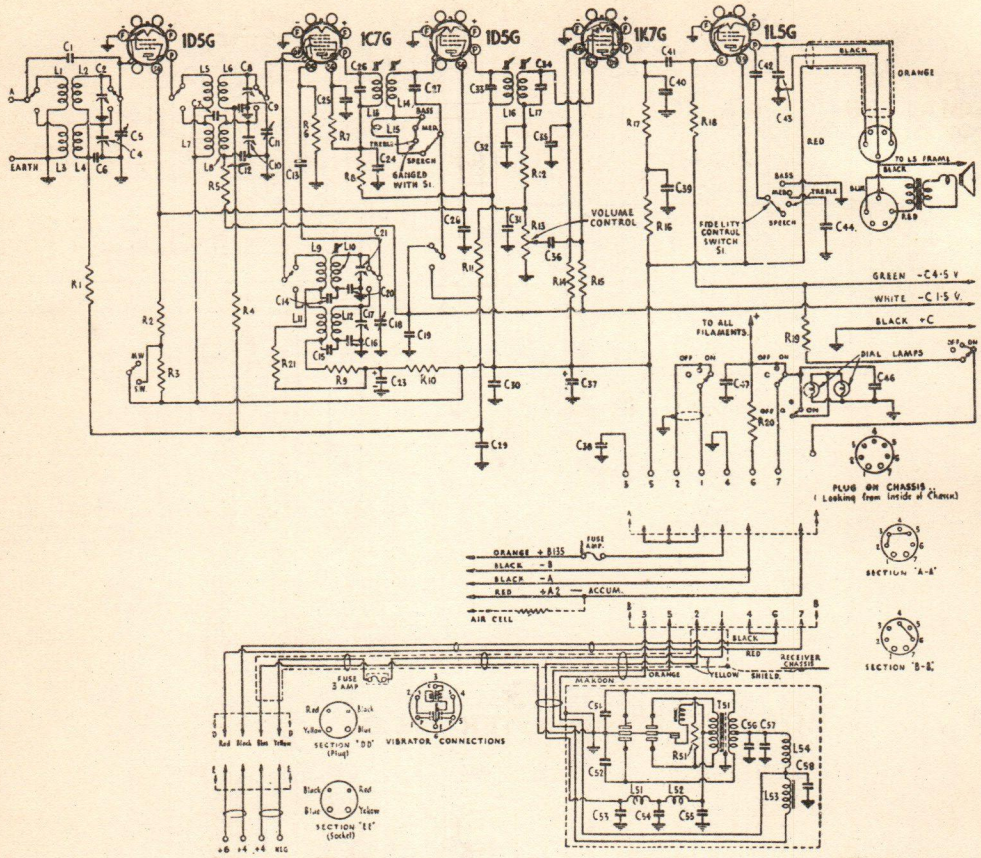
Valve		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier						
	M.W.	0	37	135	1.5	2.0
	S.W.	0	40	135	1.8	—
1C7G Detector						
	M.W.	0	55	135	2.4	2.0
	S.W.	—1.5*	55	135	3.2	—
Oscillator						
	M.W.	—	—	72	1.4	—
	S.W.	—	—	110	4.0	

Valve		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G I.F. Amplifier						
	M.W.	1.5	37	135	1.4	2.0
	S.W.	0	40	135	2.0	—
1K7G Reflex Amp. .		—1.5*	42*	69.5*	22	2.0
1L5G Pentode		—4.5*	135	131	5.5	2.0

* Cannot be measured with ordinary voltmeter.

Measured with volume control at maximum. No signal.

HOTPOINT-BANDMASTER 359 DBV (Contd.)



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	70,000 ohms, 1 watt
R3	50,000 ohms, 1 watt
R4	100,000 ohms, 1/3 watt
R5	100,000 ohms, 1/3 watt
R6	60,000 ohms, 1/3 watt
R7	40,000 ohms, 1 watt
R8	300 ohms, 1/3 watt
R9	400 ohms, 1/3 watt
R10	6,500 ohms, 1 watt
R11	1.75 megs., 1/3 watt
R12	60,000 ohms, 1/3 watt
R13	500,000 ohms Vol. Cont.
R14	1 megohm, 1 watt
R15	1.75 megs., 1/3 watt
R16	50,000 ohms, 1 watt
R17	200,000 ohms, 1 watt
R18	500,000 ohms, 1/3 watt
R19	600 ohms, 1 watt
R20	4.5 ohms, wire wound
R21	40,000 ohms, 1 watt
R51	400 ohms, 1/3 watt

Code No.	CONDENSERS
Ci	4 mmfd. mica
C2	2-20 mmfd. air trim
C3	Deleted
C4	2-20 mmfd. air trim.
C5	Tuning Condenser
C6	.05 mfd. paper
C7	4 mmfd. mica
C8	2-10 mmfd. air trim.
C9	.05 mfd. paper
C10	2-10 mmfd. air trim.
C11	Tuning Condenser
C12	.05 mfd. paper
C13	110 mmfd. mica (L)
C14	.05 mfd. paper
C15	.05 mfd. paper
C16	3500 mmfd. mica (pad.
C17	2-10 mmfd. air trim.
C18	Tuning Condenser
C19	Deleted
C20	420 mmfd. mica (pad.
C21	11-29 mmfd. air trim.
C22	Deleted
C23	8 mfd. 450V. Electro.
C24	.1 mfd. paper
C25	.1 mfd. paper
C26	70 mmfd. mica (N)
C27	70 mmfd. mica (N)
C28	.1 mfd. paper
C29	.05 mfd. paper
C30	.1 mfd. paper
C31	110 mmfd. mica (L)
C32	110 mmfd. mica (L)
C33	70 mmfd. mica (N)
C34	70 mmfd. mica (N)
C35	.1 mfd. paper
C36	.02 mfd. paper
C37	8 mfd. 450V. Electro
C38	450 mmfd. mica
C39	.5 mfd. paper
C40	110 mmfd. mica (L)
C41	.05 mfd. paper
C42	.01 mfd. paper
C43	.0025 mfd. paper
C44	.005 mfd. paper
C45	Deleted
C46	450 mmfd. mica
C47	.5 mfd. paper
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd., 450V. Electro
C57	.02 mfd. paper
C58	.5 mfd. paper

HOTPOINT-BANDMASTER 759 DU AND 269 DU

5 AND 6 Valve, Two Band, Universal A.C. - D.C. Operated Superheterodynes

TUNING RANGES: - "Standard Medium Wave" - 1600-550 K.C. "Short Wave" - 16-50M.

R.F. ALIGNMENT SETTINGS (269DU)- "Standard Medium Wave" - 600 K.C. (Osc.), 1500 K.C. (Osc., R.F. and Aerial). "Short Wave" - 18M. (Osc., R.F. and Aerial).

INTERMEDIATE FREQ. - 460 K.C. UNDISTORTED POWER OUTPUT - 2.2 watts

LOUDSPEAKER - 12 inch Type. Field Coil Res.- 2500 ohms. Dial Lamps(2)-3.2V, .35 amp

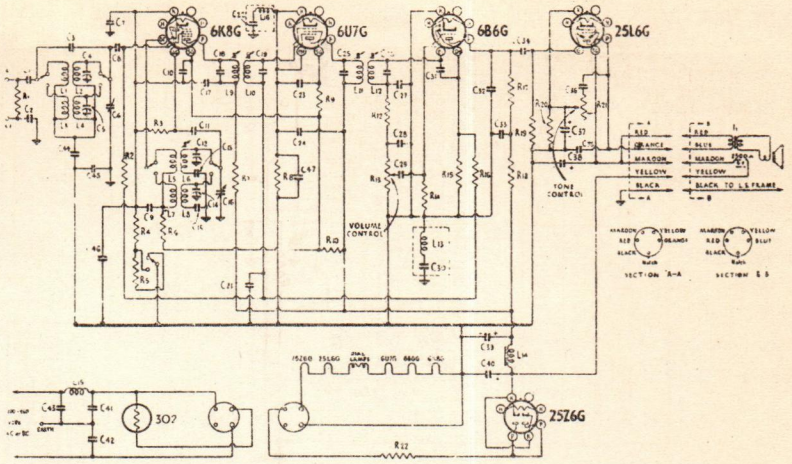
VALVE COMPLEMENT - (359 DB-V.)

6K8G Frequency Converter
6U7G I.F. Amplifier
6B6G 2nd det. A.V.C.& A.F. Amp.
25L6G Output
25Z6G Rectifier
302 Barretter

VALVE COMPLEMENT- (269 DU)

6U7G R.F. Amplifier
6K8G Frequency Converter
6U7G I.F. Amplifier
6B8G 2nd Det., A.V.C. and A.F. Amp.
25L6G Output - 25Z6G Rectifier. 302 - Barretter. 6U5 Visual Tuning Indicator

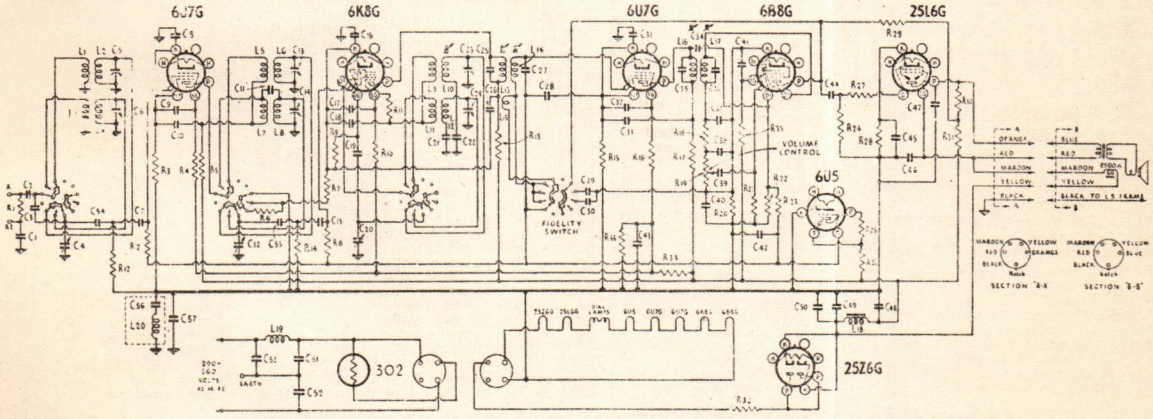
HOTPOINT-BANDMASTER 759 DU



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	500,000 ohms, 1/3 watt
R3	30,000 ohms, 1/3 watt
R4	200 ohms, 1/3 watt
R5	200 ohms, 1/3 watt
R6	600 ohms, 1/3 watt
R7	600 ohms, 1/3 watt
R8	600 ohms, 1/3 watt
R9	600 ohms, 1/3 watt
R10	11,000 ohms, 3 watt
R11	Deleted
R12	60,000 ohms, 1/3 watt
R13	500,000 ohms Vol. Cont.
R14	10 megohms, 1 watt
R15	2.3 megohms, 1/3 watt
R16	1.75 megohms, 1/3 watt
R17	200,000 ohms, 1 watt
R18	50,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	150 ohms, 3 watt
R21	100,000 ohms Tone Cont.
R22	100 ohms, 3 watt
R23	600 ohms, 1/3 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	2-20 mmfd. air trim.
C5	2-20 mmfd. air trim.
C6	Tuning Condenser
C7	.02 mfd. paper
C8	350 mmfd. mica
C9	.05 mfd. paper
C10	.1 mfd. paper
C11	70 mmfd. mica (N)
C12	11-29 mmfd. air trim.
C13	420 mmfd. mica (pad.)
C14	2-10 mmfd. air trim.
C15	3500 mmfd. mica (pad.)
C16	Tuning Condenser
C17	.1 mfd. paper
C18	70 mmfd. mica (N)
C19	70 mmfd. mica (N)
C20	Deleted
C21	.05 mfd. paper
C22	3500 mfd. mica
C23	.1 mfd. paper
C24	.1 mfd. paper
C25	70 mmfd. mica (N)
C26	70 mmfd. mica (N)
C27	110 mmfd. mica (L)
C28	110 mmfd. mica (L)
C29	.01 mfd. paper
C30	3500 mmfd. mica
C31	50 mmfd. mica (D)
C32	1000 mmfd. mica
C33	.5 mfd. paper
C34	.02 mfd. paper
C35	.005 mfd. paper
C36	.035 mfd. paper
C37	25 mfd. 25V. electro
C38	8 mfd. 450V. electro
C39	16 mfd. 450V. electro
C40	8 mfd. 450V. electro
C41	.1 mfd. paper
C42	.1 mfd. paper
C43	.1 mfd. paper
C44	.1 mfd. paper
C45	.05 mfd. paper
C46	.1 mfd. paper
C47	.1 mfd. paper
C48	.1 mfd. paper

HOTPOINT-BANDMASTER 269 DU



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	500,000 ohms, 1/3 watt
R3	400 ohms, 1/3 watt
R4	900 ohms, 1/3 watt
R5	600 ohms, 1/3 watt
R6	200 ohms, 1/3 watt
R7	300 ohms, 1/3 watt
R8	500,000 ohms, 1/3 watt
R9	50,000 ohms, 1/3 watt
R10	900 ohms, 1/3 watt
R11	600 ohms, 1/3 watt
R12	500,000 ohms, 1/3 watt
R13	600 ohms, 1/3 watt
R14	500,000 ohms, 1/3 watt
R15	400 ohms, 1/3 watt
R16	900 ohms, 1/3 watt
R17	600 ohms, 1/3 watt
R18	100,000 ohms, 1/3 watt
R19	500,000 ohms Vol. Cont.
R20	2000 ohms, 1/3 watt
R21	1.0 megohm, 1/3 watt
R22	1.75 megohm, 1/3 watt
R23	1.75 megohm, 1/3 watt
R24	500,000 ohms, 1/3 watt
R25	1.0 megohm, 1 watt
R26	20,000 ohms, 1 watt
R27	100,000 ohms, 1/3 watt
R28	150 ohms, 3 watt
R29	200,000 ohms, 1 watt
R30	100,000 ohms, 1 watt
R31	20,000 ohms, 1 watt
R32	100 ohms, 3 watt
R33	15,000 ohms, 2 watt
R34	5,000 ohms, 5 watt
R35	1.0 megohm, 1 watt

Code No.	CONDENSERS
C1	500 mmfd. mica
C2	500 mmfd. mica
C3	4 mmfd. mica
C4	Tuning Condenser
C5	2-20 mmfd. air trim.
C6	2-20 mmfd. air trim.
C7	350 mmfd. mica
C8	.01 mfd. paper
C9	.1 mfd. paper
C10	1 mfd. paper
C11	6 mmfd. mica (F)
C12	Tuning Condenser
C13	2-20 mmfd. air trim.
C14	2-20 mmfd. air trim.
C15	350 mmfd. mica
C16	.01 mfd. paper
C17	.1 mfd. paper
C18	.1 mfd. paper
C19	70 mmfd. mica (N)
C20	Tuning Condenser
C21	3200 mmfd. mica (pad.)
C22	420 mmfd. mica (pad.)
C23	11-29 mmfd. air trim.
C24	2-10 mmfd. air trim.
C25	70 mmfd. mica (N)
C26	.1 mfd. paper
C27	70 mmfd. mica (N)
C28	.05 mfd. paper
C29	.01 mfd. paper
C30	.005 mfd. paper
C31	.01 mfd. paper
C32	.1 mfd. paper
C33	.1 mfd. paper
C34	50 mmfd. mica (D)
C35	70 mmfd. mica (N)
C36	70 mmfd. mica (N)
C37	110 mmfd. mica (L)
C38	110 mmfd. mica (L)
C39	.01 mmfd. paper
C40	25 mfd. 25V. Electro.
C41	.5 mfd. paper
C42	.05 mfd. paper
C43	8 mfd. 450V. Electro
C44	.01 mfd. paper
C45	25 mfd. 25V. Electro.
C46	8 mfd. 450V. Electro.
C47	.01 mfd. paper
C48	16 mfd. 450V. Electro
C49	8 mfd. 450V. Electro.
C50	8 mfd. 450V. Electro
C51	.1 mfd. paper
C52	.1 mfd. paper
C53	.1 mfd. paper
C54	350 mmfd. mica
C55	350 mmfd. mica
C56	3500 mmfd. mica
C57	.02 mfd. paper

HOTPOINT-BANDMASTER 759 DU AND 269 DU (Contd.)

SOCKET VOLTAGES (759 DU).

Valve.		Cathode to Negative. Volts.	Screen Grid to Negative. Volts.	Plate to Negative. Volts.	Plate Current. M.A.	Heater Volts.
6K8G Detector	M.W.	5.0	100	210	1.0	6.3
	S.W.	3.0	100	210	1.5	—
Oscillator	M.W.	—	—	100	3.0	—
	S.W.	—	—	100	3.0	—
6U7G I.F. Amplifier .		4.0	100	210	5.5	6.3
6B6G 2nd Det., A.V.C. and 1st Audio ...		0	—	85*	0.5	6.3
25L6G Output		7.0	100	85	43.0	25.0
25Z6G Rectifier 230			—	235	—	25.0

Total Current 63 M.A. Voltage across L.S. field 120 volts.

Measured at 240 volts D.C. supply. No Signal. Controls maximum clockwise.

* Cannot be measured with ordinary voltmeter.

SOCKET VOLTAGES (269 DU).

Valve.		Cathode to Negative. Volts.	Screen Grid to Negative. Volts.	Plate to Negative. Volts.	Plate Current. M.A.	Heater Volts.
6U7G R.F. Amp. ...		3.5	100	195	6.5	6.3
6K8G Detector	M.W.	6.0	95	195	0.8	6.3
	S.W.	2.5	95	195	1.0	—
Oscillator	M.W.	—	—	95	3.0	—
	S.W.	—	—	95	3.0	—
6U7G I.F. Amp.	M.W.	5.0	100	195	4.5	6.3
	S.W.	3.0	100	195	7.0	—
6B8G 2nd Det., A.V.C. and 1st Audio		1.3	35*	50*	0.5	6.3
25L6G Output		7.0	105	90	43.0	25.0
25Z6G Rectifier 230			—	235	—	25.0

Total current, 75 M.A. Voltage across speaker field, 115 volts.

Measured at 240 volts D.C. supply. No Signal. Controls maximum clockwise.

* Cannot be measured with ordinary voltmeter.

HOTPOINT-BANDMASTER A359 ME, A359 MEZ, A359 DE, A359 DEZ

5 V. **5-Valve, One Band (A359 ME, A359 MEZ), and Two Band (A359 DE, A359 DEX), Automatic and Manually Tuned, A.C. Operated Superheterodynes**

TUNING RANGES:- "Standard Medium Wave," 1600-550 K.C. "Short Wave" - A359 DE, 16-50M. "Short Wave" - A359 DE-Z, 13.65-46M.

MANUAL R.F. ALIGNMENT SETTINGS:- "Standard Medium Wave," 600 K.C. (Osc.). 1500 K.C. (Osc. & Aer.) "Short Wave" - A 359 DE, 18 metres (Osc. & Aerial). "Short Wave" - A359 DE-Z, 15 metres (Osc. & Aerial). INTERMEDIATE FREQUENCY - 460 K.C.

POWER CONSUMPTION - 60 watts (A359 ME and A359DE), 80 watts (A359 MEZ and A359 DE-Z).

VALVE COMPLEMENT -(A359 ME and A359 DE).

1. 6K8G Freq. Converter
2. 6U7G I.F. Amplifier
3. 6G8G I.F.Amp.2nd Det.A.V.C.& A.F.Amp.
4. 6F6G Output Pentode
5. 5Y3G Rectifier.

6U5 Visual Tuning Indicator.

VALVE COMPLEMENT (A359 ME-Z and A359 DE-Z).

1. 6A8G Freq. Converter
2. 6U7G I.F. Amplifier
3. 6B8G 2nd Det.,A.V.C. and A.F. Amp.
4. 6V6G Beam Power Output
5. 5V4G Rectifier

6U5 Visual Tuning Indicator

UNDISTORTED POWER OUTPUT - 3 watts (A359 ME A359 DE), 4.25 watts (A359 ME-Z A359 DE-Z)

Field Coil Resistance - 1550 ohms (A359 ME A359 DE), 1700 ohms (A359 ME-Z A359 DE-Z).

SOCKET VOLTAGES (A359 ME).

Valve	Bias	Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector M.W.	—1.3‡	351	100	250	1.3	.6.3
Oscillator	—	—	—	100	3.0	—
6U7G I.F. Amplifier .	—1.3‡	3.0†	100	250	7.7	6.3
6G8G Reflex Amp. ..	—	1.0†	19*	174*	44	6.3
6F6G Pentode	—17‡	—	250	240	33.5	6.3
5Y3G Rectifier	700/350 volts, 62.5 M.A. total current.					5.0

* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

SOCKET VOLTAGES (A359 DE).

Valve	Bias	Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detector M.W.	—1.3‡	3.5†	100	250	1.3	6.3
S.W.	—1.3‡	2.0†	100	250	1.9	—
Oscillator	—	—	—	100	3.7	—
6U7G I/F. Amplifier						
MW.	—1.3‡	3.2†	100	250	7.0	6.3
S.W.	—1.3‡	2.0†	100	250	8.0	—
6G8G Reflex Amp. ..	—1.3‡	—	18*	165*	56	6.3
6F6G Pentode	—17‡	—	250	230	33	6.3
5Y3G Rectifier	700/350 volts, 63 M.A. total current					5.0

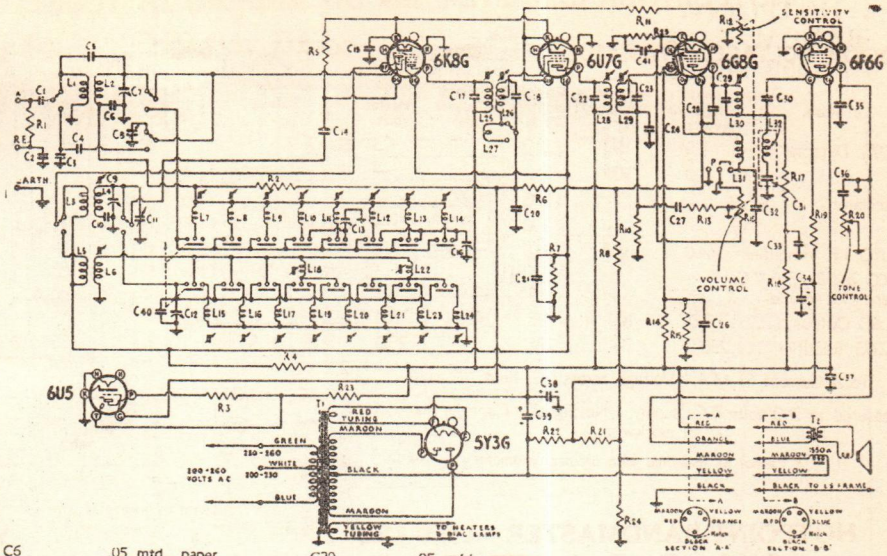
* Cannot be measured with ordinary voltmeter.

‡ Control grid to chassis. Cannot be measured with ordinary voltmeter.

† Cathode to chassis.

Measured at 240 volts A.C. supply. No signal input. Volume control at maximum.

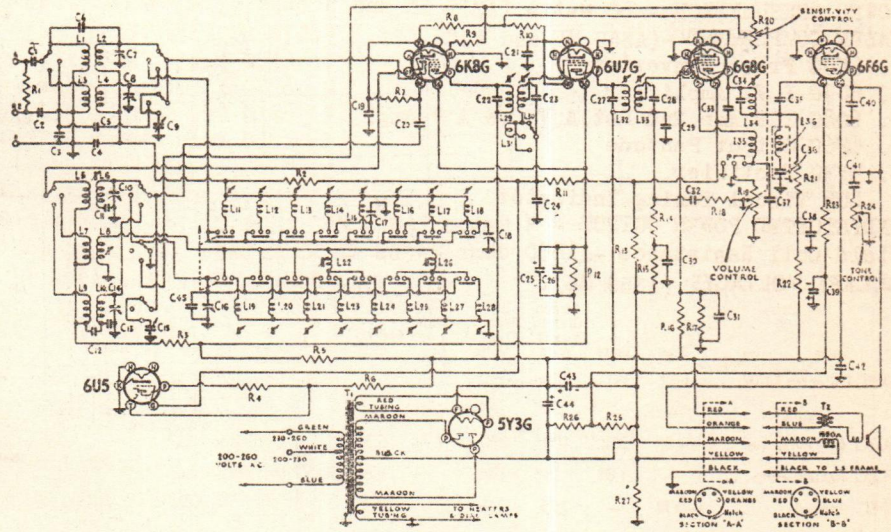
HOTPOINT-BANDMASTER A359 ME (Contd.)



Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	1 megohm, 1 watt
R4	11,000 ohms, 3 watt
R5	50,000 ohms, 1/3 watt
R6	1.75 megohms, 1/3 watt
R7	20,000 ohms, 1 watt
R8	2.3 megohms, 1/3 watt
R9	Deleted
R10	2.3 megohms, 1/3 watt
R11	200 ohms, 1/3 watt
R12	3,000 ohms Sens. Cont.
R13	500,000 ohms, 1/3 watt
R14	1 megohm, 1 watt
R15	100,000 ohms, 1 watt
R16	500,000 ohms Vol. Cont.
R17	150,000 ohms, 1 watt
R18	20,000 ohms, 1 watt
R19	500,000 ohms, 1/3 watt
R20	100,000 ohms Tone Cont
R21	20,000 ohms, 1 watt
R22	100,000 ohms, 1 watt
R23	20,000 ohms, 1 watt
R24	20 ohms, 3 watt
R25	2,000 ohms, 1/3 watt

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	260 mmfd., mica
C5	4 mmfd., mica
C6	.05 mfd., paper
C7	2-20 mmfd., air trim.
C8	Tuning Condenser
C9	11-29 mmfd., air trim.
C10	420 mmfd., mica (pad.)
C11	Tuning Condenser
C12	6-24 mmfd., air. trim.
C13	6-24 mmfd., air trim.
C14	70 mmfd., mica (N)
C15	.1 mfd., paper
C16	32-50 mmfd., air trim.
C17	115 mmfd., mica (A)
C18	130 mmfd., mica (H)
.19	Deleted
C20	.05 mfd., paper
C21	.1 mfd., paper
C22	115 mmfd., mica (A)
C23	130 mmfd., mica (H)
C24	110 mmfd., mica (L)
C25	Deleted
C26	.1 mfd., paper
C27	.01 mfd., paper
C28	50 mmfd., mica (D)
C29	70 mmfd., mica (N)
C30	.02 mfd., paper
C31	115 mmfd., mica (A)
C32	110 mfd., mica (L)
C33	.5 mfd., paper
C34	25 mfd., 25 V. electrolytic
C35	.0025 mfd., paper
C36	.035 mfd., paper
C37	.1 mfd., paper
C38	8 mfd., 450 V. electrolytic
C39	8 mfd., 500 V. electrolytic
C40	150 mmfd. Temp. Compensated
C41	25 mfd., 25 V. electrolytic

HOTPOINT-BANDMASTER A359 DE

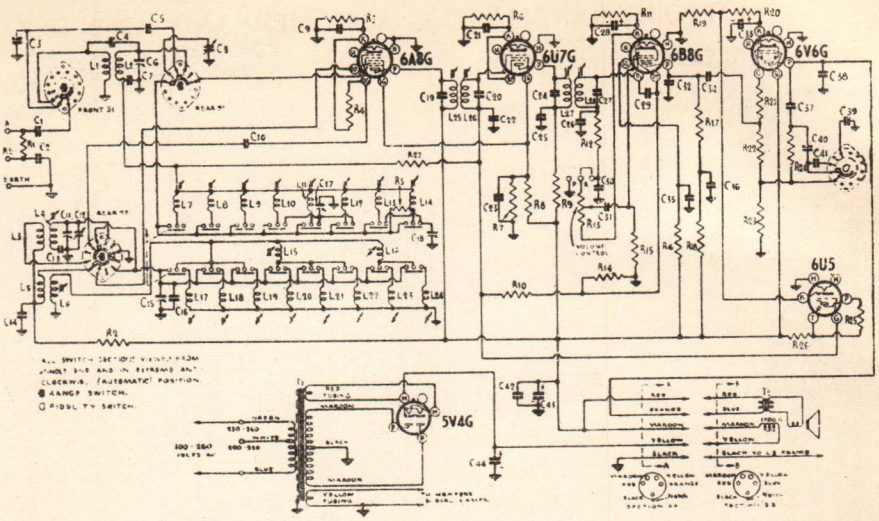


Code No.	RESISTORS.
R1	100,000 ohms. 1/3 W.
R2	100,000 ohms, 1/3 W.
R3	600 ohms, 1/3 W.
R4	1 megohm, 1 watt
R5	11,000 ohms, 3 W.
R6	20,000 ohms, 1 W.
R7	50,000 ohms, 1/3 W
R8	200 ohms, 1/3 W.
R9	100 ohms, 1/3 W.
R10	200 ohms, 1/3 W.
R11	1.75 megohms, 1/3 W.
R12	20,000 ohms, 1 W.
R13	2.3 megohms, 1/3 W.
R14	2.3 megohms, 1/3 W.
R15	300,000 ohms, 1/3 W.
R16	1 megohm, 1 W.
R17	100,000 ohms, 1 W.
R18	500,000 ohms, 1/3 W.
R19	500,000 ohms Vol. Cont.
R20	3,000 ohms Sens. Cont.
R21	150,000 ohms, 1 W.
R22	20,000 ohms, 1 W.
R23	500,000 ohms, 1/3 W.
R24	100,000 ohms Tone Cont
R25	20,000 ohms, 1 W.
R26	100,000 ohms, 1 W.
R27	20 ohms, 3 W.

Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	.05 mfd., paper
C5	270 mmfd., mica
C6	4 mmfd., mica
C7	2-20 mmfd., air trim.
C8	2-20 mmfd., air trim.
C9	Tuning Condenser
C10	11-29 mmfd., air trim.
C11	420 mmfd., mica (pad.)
C12	.05 mfd., paper
C13	3,500 mmfd., mica (padder)
C14	2-10 mmfd., air trim.
C15	Tuning Condenser
C16	2-20 mmfd., air trim.
C17	6-24 mmfd., air trim.
C18	32-50 mmfd., air trim
C19	.05 mfd., paper
C20	70 mmfd., mica (N)
C21	.05 mfd. paper
C22	115 mmfd., mica (A)
C23	130 mmfd., mica (N)
C24	.05 mfd., paper
C25	8 mfd., 450 V. Electrolytic
C26	.1 mfd., paper
C27	115 mmfd., mica (A)
C28	130 mmfd., mica (N)
C29	110 mmfd., mica (L)
C30	.1 mfd., paper
C31	.1 mfd., paper
C32	.01 mfd., paper
C33	50 mmfd., mica (D)
C34	70 mmfd., mica (N)
C35	.02 mfd., paper
C36	115 mmfd., mica (A)
C37	110 mmfd., mica (L)
C38	.5 mfd., paper
C39	25 mfd., 25 V. electrolytic
C40	.0025 mfd., paper
C41	.035 mfd., paper
C42	.1 mfd., paper
C43	16 mfd., 500 V. electrolytic
C44	16 mfd., 500 V electrolytic
C45	150 mmfd., Temp. Compensated

HOTPOINT-BANDMASTER A359 MEZ

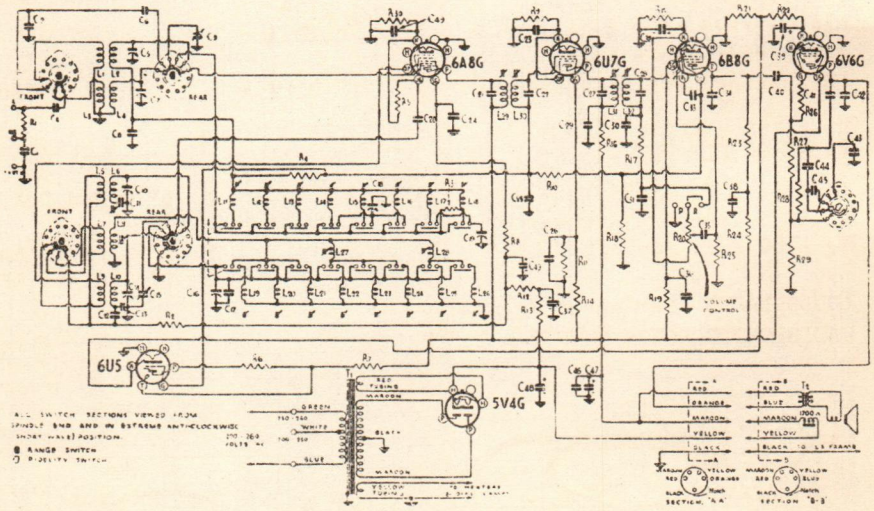
Code No.	RESISTORS
R1	100,000 ohms, 1/3 W
R2	20,000 ohms, 1 W.
R3	350 ohms, 1/3 W.
R4	50,000 ohms, 1/3 W.
R5	500,000 ohms, 1/3 W.
R6	800 ohms, 1/3 W.
R7	11,000 ohms, 3 W
R8	11,000 ohms, 3 W
R9	3,000 ohms, 1 W.
R10	1.75 megohms, 1/3 W
R11	2,000 ohms, 1/3 W.
R12	20,000 ohms, 1/3 W.
R13	500,000 ohms, Vol. Cont.
R14	2.3 megohms, 1/3 W.
R15	1.75 megohms, 1/3 W
R16	3 megohms, 1 W.
R17	250,000 ohms, 1 W.
R18	20,000 ohms, 1 W.
R19	50 ohms, 3 W.
R20	200 ohms, 3 W
R21	50,000 ohms, 1/3 W.
R22	390,000 ohms, 1/3 W.
R23	50,000 ohms, 1/3 W.
R24	250,000 ohms, 1/3 W.
R25	1 megohm, 1 W.
R26	20,000 ohms, 1 W.
R27	100,000 ohms, 1/3 W



Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	4 mmfd., mica
C5	260 mmfd., mica
C6	2-20 mmfd., air trim.
C7	.05 mfd., paper
C8	Tuning Condenser
C9	.05 mfd., paper
C10	70 mmfd., mica (N)
C11	11-29 mmfd., air trim.
C12	Tuning Condenser
C13	440 mmfd., mica (pad.)
C14	1mmfd., paper
C15	2-20 mmfd., air trim.
C16	150 mmfd., temp. comp.
C17	2-20 mmfd., air trim.
C18	32-50 mmfd., air trim.
C19	70 mmfd., mica (N)
C20	70 mmfd., mica (N)
C21	.1 mfd., paper
C22	.05 mfd., paper
C23	1 mfd., paper
C24	70 mmfd., mica (N)
C25	.05 mfd., paper
C26	110 mmfd., mica (L)
C27	70 mmfd., mica (N)
C28	25 mfd., 25 V. electro.
C29	50 mmfd., mica (D)
C30	110 mmfd., mica (L)
C31	.01 mfd., paper
C32	110 mmfd., mica (L)
C33	25 mfd., 25 V. electro
C34	.02 mfd., paper
C35	1 mfd., paper
C36	.5 mfd., paper
C37	.05 mfd., paper
C38	.0025 mfd., paper
C39	2,000 mmfd., mica
C40	1,500 mmfd., mica
C41	700 mmfd., mica
C42	.1 mfd., paper
C43	16 mfd., 500 V. electro.
C44	16 mfd., 500 V. electro

BANDMASTER A359 DEZ

R1	100,000 ohms, 1/3 W
R2	10,000 ohms, 1 W.
R3	500,000 ohms, 1/3 W.
R4	100,000 ohms, 1/3 W.
R5	50,000 ohms, 1/3 W.
R6	1 meg., 1 W.
R7	20,000 ohms, 1 W.
R8	50,000 ohms, 1 W.
R9	800 ohms, 1/3 W
R10	1.75 megs., 1/3 W.
R11	10,000 ohms, 2 W.
R12	10,000 ohms, 1 W
R13	10,000 ohms, 1 W.
R14	14,000 ohms, 3 W
R15	2,000 ohms, 1/3 W
R16	3,000 ohms, 1 W.
R17	20,000 ohms, 1/3 W
R18	2.3 megs., 1/3 W
R19	3 megs., 1 W
R20	500,000 ohms Vol. Cont.
R21	50 ohms, 3 W
R22	200 ohms, 3 W
R23	250,000 ohms, 1 W
R24	20,000 ohms, 1 W
R25	1.75 megs., 1/3 W
R26	50,000 ohms, 1/3 W.
R27	390,000 ohms, 1/3 W.
R28	250,000 ohms, 1/3 W.
R29	50,000 ohms, 1/3 W.
R30	400 ohms, 1/3 W



Code No.	CONDENSERS
C1	2,000 mmfd., mica
C2	2,000 mmfd., mica
C3	2,000 mmfd., mica
C4	Deleted
C5	2-20 mmfd., air trim.
C6	260 mmfd., mica
C7	2-20 mmfd., air trim.
C8	.05 mfd., paper
C9	Tuning Condenser
C10	11-29 mmfd., air trim.
C11	440 mfd., mica (pad.)
C12	.05 mfd., paper
C13	3,500 mmfd. mica (padder)
C14	2-10 mmfd., air trim.
C15	Tuning Condenser
C16	2-20 mmfd., air trim
C17	150 mmfd., Temp Compensated
C18	2-20 mmfd., air trim.
C19	32-50 mmfd., air trim.
C20	70 mmfd., mica (N)
C21	70 mmfd., mica (N)
C22	70 mmfd., mica (N)
C23	.1 mfd., paper
C24	.1 mfd., paper
C25	.05 mfd., paper
C26	1 mfd., paper
C27	70 mmfd., mica (N)
C28	70 mmfd., mica (N)
C29	.05 mfd., paper
C30	110 mmfd., mica (L)
C31	110 mmfd., mica (L)
C32	25 mfd., 25 V. electrolytic
C33	50 mmfd., mica (D)
C34	110 mmfd., mica (L)
C35	.01 mfd., paper
C36	.1 mfd., paper
C37	.8 mfd., 450 V. electrolytic
C38	.5 mfd., paper
C39	25 mfd., 25 V. electrolytic
C40	.02 mfd., paper
C41	.05 mfd., paper
C42	.0025 mfd., paper
C43	2,000 mmfd., mica
C44	1,500 mmfd., mica
C45	700 mmfd., mica
C46	.1 mfd., paper
C47	16 mfd., 500 V. electrolytic
C48	16 mfd., 500 V. electrolytic
C49	8 mfd., 450 V. electrolytic

HOTPOINT-BANDMASTER A359 MEZ AND A359 DEZ (Contd.)

SOCKET VOLTAGES (A359MEZ).

Valve	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6A8G Detector	5.0	100	268	3.5	6.3
Oscillator	—	—	150	5.0	—
6U7G I.F. Amplifier					
M.W.	5.8	100	250	6.0	6.3
S.W.	5.8	100	243	8.0	—
6B8G 2nd Detector ..	1.0	35*	135*	0.45	6.3
6V6G Output	12.5	268	255	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. total current.				5.0

Voltage across loudspeaker field, 150 volts.

* Cannot be measured with ordinary voltmeter.

Measured at 240 volts A.C. supply. No signal input.

Volume Control at maximum.

SOCKET VOLTAGES (A359DEZ).

Valve	Cathode Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A	Heater Volts
6A8G Detector	4.0	100	265	3.0	6.3
Oscillator	—	—	170	4.5	—
6U7G I.F. Amplifier ..	5.25	100	250	5.5	6.3
6B8G Detector	1.0	35*	135*	0.5	6.3
6V6G Output	12.5	265	253	45	6.3
5V4G Rectifier	730/365 volts, 80 M.A. total current				5.0

Voltage across loudspeaker field, 160 volts

* Cannot be measured with ordinary voltmeter

Measured at 240 volts A.C. supply. No signal input

Volume Control at maximum

HOTPOINT-BANDMASTER 269 DB-V

6-Valve, Two Band, Battery Operated Superheterodyne

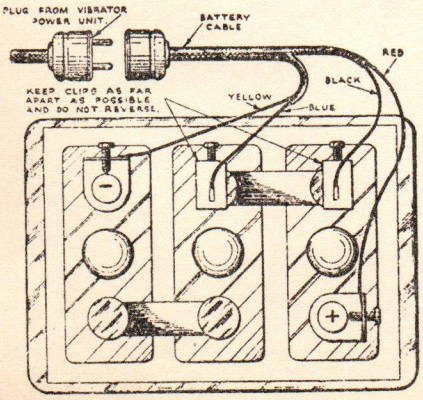
TUNING RANGES:- "Standard Medium Wave" - 1600-550 K.C. "Short Wave" - 16-50M.
R.F. ALIGNMENT SETTINGS - "Standard Medium Wave" - 600 K.C. (Osc.,) 1500 K.C. (Osc.,R.F. Aer.). "Short Wave" - 18M. (Osc., R.F. Aer.).
INTERMEDIATE FREQUENCY - 460 K.C.

CURRENT CONSUMPTION.	270B.	270V.
"A" Battery at 2 volts	0.60 Amp.	
"A" Battery at 6 volts		1.2 Amps. (Supplied from Vibrator Power Unit)
"B" Battery at 135 volts	17-21 M.A.	

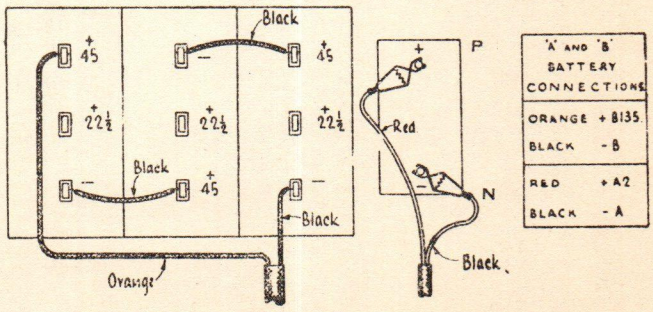
VALVE COMPLEMENT -

1. 1D5G R.F. Amplifier
2. 1C7G Frequency Converter
3. 1D5G I.F. Amplifier
4. 1F7G 2nd Det., A.V.C. and A.F. Amp.
5. 1E5G Audio Amplifier
6. 1J6G Class "B" Output

LOUDSPEAKER (Permanent Magnet)
UNDISTORTED POWER OUTPUT - 1.5 Watts

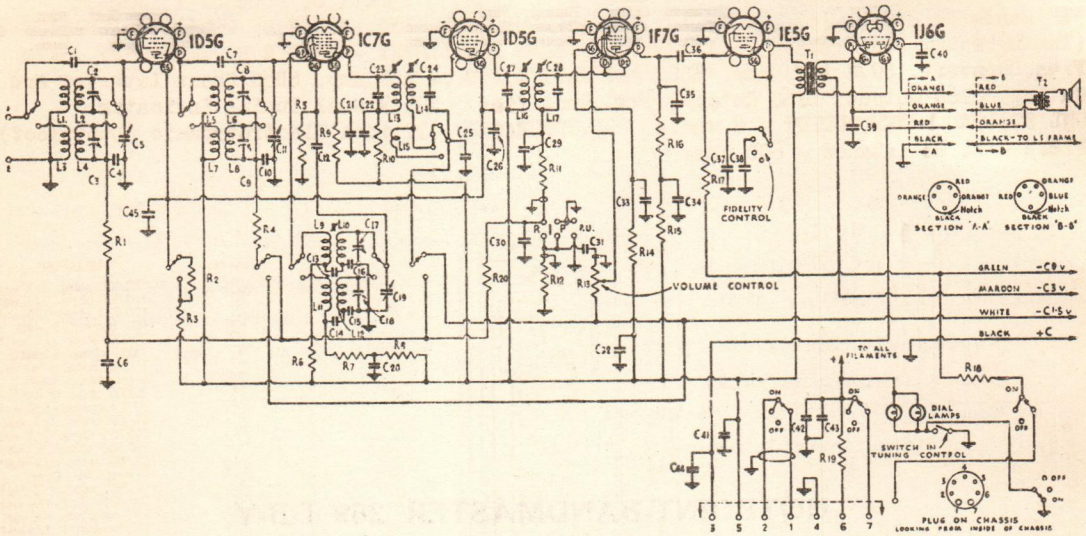


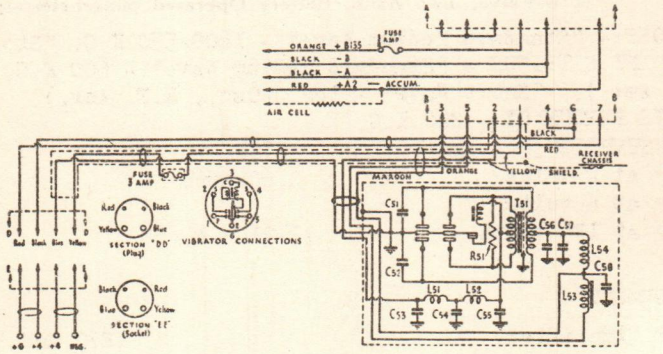
Accumulator Connections.



"A" and "B" Battery Connections.

HOTPOINT-BANDMASTER 269 DB-V (Contd.)





Code No.	RESISTORS
R1	100,000 ohms, 1/3 watt
R2	60,000 ohms, 1 watt
R3	60,000 ohms, 1 watt
R4	100,000 ohms, 1/3 watt
R5	50,000 ohms, 1/3 watt
R6	50,000 ohms, 1 watt
R7	400 ohms, 1/3 watt
R8	6500 ohms, 1 watt
R9	40,000 ohms, 1 watt
R10	300 ohms, 1/3 watt
R11	60,000 ohms, 1/3 watt
R12	300,000 ohms, 1/3 watt
R13	1 megohm Vol. Control
R14	1 megohm, 1 watt
R15	50,000 ohms, 1 watt
R16	200,000 ohms, 1 watt
R17	500,000 ohms, 1/3 watt
R18	900 ohms, 1 watt
R19	4·5 ohms, wire wound
R20	1.75 megohms, 1/3 watt
R51	400 ohms, 1/3 watt

Code No.	CONDENSERS
C1	4 mmfd. mica
C2	2-10 mmfd. Air Trim.
C3	2-20 mmfd. Air Trim.
C4	.05 mfd. paper
C5	Tuning Condenser
C6	.05 mfd. paper
C7	4 mmfd. mica
C8	2-10 mmfd. Air Trim.
C9	2-10 mmfd. Air Trim.
C10	.05 mfd. paper
C11	Tuning Condenser
C12	70 mmfd. mica (N)
C13	.05 mfd. paper
C14	.05 mfd. paper
C15	3200 mmfd. mica (pad.)
C16	420 mmfd. mica (pad.)
C17	11-29 mmfd. Air Trim.
C18	2-10 mmfd. Air Trim.
C19	Tuning Condenser
C20	8 mfd. 450V. electro.
C21	.1 mfd. paper
C22	.1 mfd. paper
C23	70 mmfd. mica (N)
C24	70 mmfd. mica (N)
C25	.02 mfd. paper
C26	.1 mfd. paper
C27	70 mmfd. mica (N)
C28	70 mmfd. mica (N)
C29	110 mmfd. mica (L)
C30	110 mmfd. mica (L)
C31	.02 mfd. paper
C32	.5 mfd. paper
C33	.1 mfd. paper
C34	.5 mfd. paper
C35	110 mmfd. mica (L)
C36	.05 mfd. paper
C37	.035 mfd. paper
C38	.01 mfd. paper
C39	.005 mfd. paper
C40	.005 mfd. paper
C41	8 mfd. 450V. electro
C42	.5 mfd. paper
C43	450 mmfd. mica
C44	450 mmfd. mica
C45	.1 mfd. paper
C51	.01 mfd. paper
C52	.01 mfd. paper
C53	.1 mfd. paper
C54	.25 mfd. paper
C55	.25 mfd. paper
C56	8 mfd., 450V. electro.
C57	.02 mfd. paper
C58	.5 mfd. paper

SOCKET VOLTAGES.

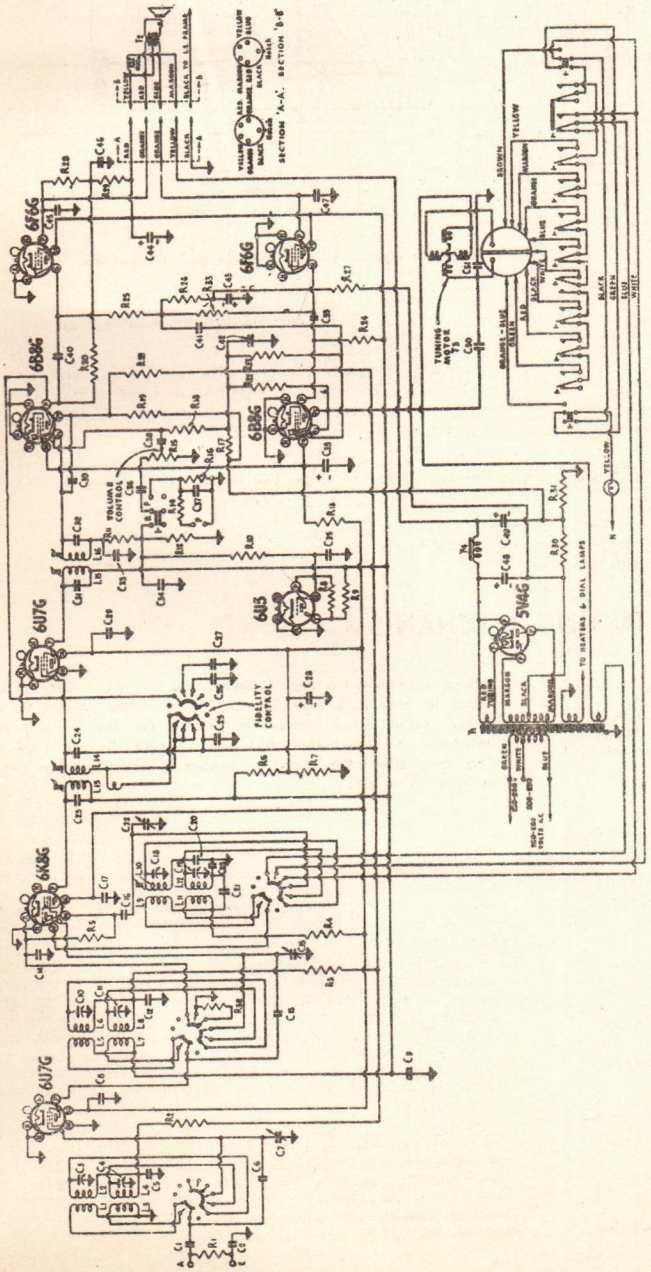
Valve	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1D5G R.F. Amplifier					
M.W.	0	35	135	1.5	2.0
S.W.	0	40	135	2.0	—
1C7G Detector					
M.W.	0	50	134	1.5	2.0
S.W.	—1.5*	60	134	2.2	—
Oscillator M.W. ..	—	—	60	1.4	—
S.W. ..	—	—	110	3.8	—
1D5G I.F. Amplifier					
M.W.	—1.5*	35	135	0.8	2.0
S.W.	0	40	135	2.0	—
1F7G 2nd Detector ..	—1.5*	35*	65*	0.28	2.0
1E5G A.F. Amplifier ...	—9.0*	—	135	3.7	2.0
1J6G Output	—3.0*	—	135	4.0	2.0

* Cannot be measured with ordinary voltmeter.
Measured with volume control at maximum. No signal.

HOTPOINT-BANDMASTER 289 DE

8 Valve, Two Band, Automatic Tuning, A.C. Operated Superheterodyne

TUNING RANGES: "Standard Medium Wave" (A) 1600-550 K.C. "Short Wave" (B) 16-50M. R.F. ALIGNMENT SETTINGS: "A" Band - 600 K.C. (Osc.), 1500 K.C. (Osc.,R.F. Aer.). "B" Band- 18 metres (Osc.,R.F.,Aer.). INTERMEDIATE FREQ.: 460 K.C. POWER CONSUMPTION:- (Tuning Motor Inoperative) - 105 watts. VALVE COMPLEMENT - 6U7G R.F. Amplifier. 6K8G - Freq. Convert. 6U7G I.F. Amp. 6B8G 2nd det.,A.V.C.,& A.F.Amp. 6B8G Phase Inverter and Muting. 6F6G Output. 6F6G Output. 5V4G Rectifier. 6U5 Visual Tuning Indicator. UNDISTORTED POWER OUTPUT - 8 watts. LOUDSPEAKER - 12 inch Electrodynamic (Dustproof) Field Coil Resistance - 600 ohms.



Code No.	RESISTORS.
R1	100,000 ohms, 1/3 watt
R2	100,000 ohms, 1/3 watt
R3	100,000 ohms 1/3 watt
R4	600 ohms 1/3 watt
R5	50,000 ohms 1/3 watt
R6	7,000 ohms, 5 watts
R7	11,000 ohms, 3 watts
R8	1 megohm, 1 watt
R9	20,000 ohms, 1 watt
R10	1.75 megohms, 1/3 watt
R11	60,000 ohms, 1/3 watt
R12	300,000 ohms, 1/3 watt
R13	250,000 ohms, 1 watt
R14	20,000 ohms, 1/3 watt
R15	1 meg. Vol. Cont.
R16	50,000 ohms, 1/3 watt
R17	500,000 ohms, 1/3 watt
R18	1.75 megohms, 1/3 watt
R19	1.75 megohms, 1/3 watt
R20	250,000 ohms, 1 watt
R21	1.75 megohms, 1/3 watt
R22	100,000 ohms, 1/3 watt
R23	1 megohm, 1/3 watt
R24	250,000 ohms, 1 watt
R25	390,000 ohms, 1/3 watt
R26	100,000 ohms, 1/3 watt
R27	50,000 ohms, 1/3 watt
R28	100,000 ohms, 1 watt
R29	20,000 ohms, 1 watt
R30	100 ohms, 3 watts
R31	26 ohms, 3 watts
R32	200 ohms, 1/3 watt
R33	390,000 ohms, 1/3 watt

Code No.	CONDENSERS.
C1	500 mmfd. Mica
C2	500 mmfd. Mica
C3	2-20 mmfd. Air Trim.
C4	2-10 mmfd. Air Trim.
C5	.05 mfd. Paper
C6	4 mmfd. Mica
C7	Tuning Condenser
C8	.1 mfd. Paper
C9	.5 mfd. Paper
C10	2-20 mmfd. Air Trim.
C11	2-10 mmfd. Air Trim.
C12	.05 mfd. Paper
C13	4 mmfd. Mica
C14	.1 mfd. Paper
C15	Tuning Condenser
C16	70 mmfd. Mica (N.)
C17	.1 mfd. Paper
C18	11-29 mmfd. Air Trim
C19	2-10 mmfd. Air Trim.
C20	420 mmfd. Mica (Pad.
C21	.05 mfd. Paper
C22	Tuning Condenser
C23	80 mmfd. Mica (R.)
C24	80 mmfd. Mica (R.)
C25	.05 mfd. Paper
C26	.0015 mfd. Paper
C27	.0025 mfd. Paper
C28	8 mfd. 450 V. Elect.
C29	.1 mfd. Paper
C30	50 mmfd. Mica (D.)
C31	80 mmfd. Mica (R.)
C32	80 mmfd. Mica (R.)
C33	110 mmfd. Mica (L.)
C34	110 mmfd. Mica (L.)
C35	.05 mfd. Paper
C36	.05 mfd. Paper
C37	.0025 mfd. Paper
C38	.05 mfd. Paper
C39	8 mfd. 450 V. Elect.
C40	.01 mfd. Paper
C41	.5 mfd. Paper
C42	.5 mfd. Paper
C43	25 mfd. 25 V. Elect.
C44	8 mfd. 500 V. Elect.
C45	.0025 mfd. Paper
C46	.005 mfd. Paper
C47	.0025 mfd. Paper
C48	16 mfd. 500 V. Elect.
C49	16 mfd. 500 V. Elect.
C50	.25 mfd. Paper
C51	60 mfd. Electrolytic
C52	3,200 mmfd. Mica (Padder)
C53	.01 mfd. Paper

ADJUSTMENTS FOR AUTOMATIC TUNING.

Any eight stations in the Medium Wave band may be selected for Automatic tuning. The stations are identified by means of the call-sign tabs supplied for insertion in the recesses on the keys. A sheet of tabs, on which are printed the call-signs of all Australasian stations accompanies the set. Call-signs of the eight stations selected should be neatly cut from the sheet.

The stations should be adjusted in order of their frequency in kilocycles. This order is used in the following example:—

(1)	2SM	1270 K.C.	(5)	2UE	950 K.C.
(2)	2CH	1190 K.C.	(6)	2GB	870 K.C.
(3)	2UW	1110 K.C.	(7)	2BL	740 K.C.
(4)	2KY	1020 K.C.	(8)	2FC	610 K.C.

Turn the receiver ON and allow it to operate for at least five minutes before making adjustments.

Proceed to set up for Automatic tuning as follows:—

(1) Press the key labelled "Manual", and set the Fidelity Control in any but the extreme clockwise position.

(2) Manually tune station No. 1. Be sure to tune accurately by watching the Tuning Indicator. Tune till the darkened sector of the Indicator's screen is at the narrowest possible width.

(3) Look in the back of the receiver and two semi-circular slots in which are eight adjusting pins, as shown, numbered 1 to 8 in Fig. 2, will be seen. These correspond to the keys on the keyboard, numbered 1 to 8, from left to right.

(4) Hold the "Manual" key down and press key No. 1 on the keyboard. Both keys will stay down. Then move adjusting pin No. 1 along the semi-circular slot, either clockwise or anti-clockwise, until the pilot globe situated above the adjusting pin goes out. It will be noticed that when the adjusting pin is moved to the right past this position the globe will light brightly and to the left dimly.

This is normal and care should be taken in making this adjustment to see that the globe does go completely out.

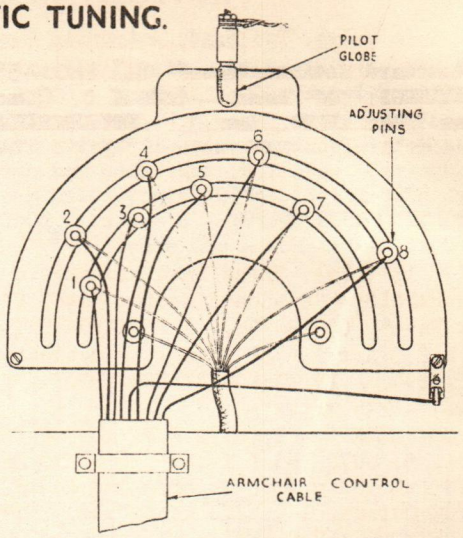


Fig. 2.—Automatic adjusting pins and Armchair Control connections.

(5) Press another key and key No. 1 and the "Manual" key will then be released.

(6) Press key No. 1 again. The pilot globe will stay out and the station will be heard. If reproduction is not normal, repeat the above procedure, as the adjustments were probably not carried out with great enough accuracy.

Proceed similarly for the other seven keys, and then any one of the eight stations may then be obtained by simply pressing the key on which is the call-sign of the desired station.

To change a station at any time, simply follow the same procedure and remember to replace the call-sign tab in the key with the new one.

AUTOMATIC TUNING MECHANISM.

ADJUSTMENT OF FLYWHEEL FRICTION.

In normal operation, the motor drives the tuning condenser and selector disc until the insulation line just passes the particular station-setting contact. The motor then reverses and moves the disc slowly in the opposite direction until the insulation line is under the contact, and the mechanism stops.

In some cases, particularly with high line-voltage, the disc may make two or three reversals before stopping.

The flywheel friction adjustment spring washer should be set to give the least number of reversals with the chassis in normal operating position.

ADJUSTMENT OF SELECTOR DISC.

The brass selector disc is fastened to the rear shaft of the tuning condenser by means of two set-screws. When the condenser is at maximum (plates fully meshed) the insulation line should be horizontal, with the operating-end at the right (viewed from rear). The operating-end has red insulating material and the brass is bevelled at this end.

The selector disc should be set so that the contact-tip plungers in the station-setting contacts project not more than 1/16-in. from the body of the contacts.

ARMCHAIR CONTROL UNIT.

WARNING:

Before installing the Armchair Control Unit, be sure that the locking mechanism has been removed from the unit. This can be tested by pressing a push button. If the button returns to its normal position when pressure is released, the unit is ready for installation. If the button stays down, remove the unit from its case, then remove the locking mechanism by drilling-out four rivets by which it is held.

When an Armchair Control Unit is connected to the receiver, as shown in Fig. 2, it duplicates the action of the eight station selector keys on the receiver's keyboard. That is, after pressing the "Manual" key on the receiver, eight broadcast stations may be tuned automatically at any distance up to the length of the connecting cable from the instrument (25 feet).

The unit is supplied fitted with a 9 wire flat cable. Take the central wire and solder it to a lug attached to the lower right-hand corner of the selector mechanism frame. The remaining eight wires are then soldered to the eight adjusting pins. The first, or right-hand wire, looking towards the unit, to No. 1 pin, the second to No 2 pin and so on. The call-signs of the eight selected stations, which must correspond to those for which the receiver is set, should be removed from the sheet supplied and fitted beneath the windows of the unit.

Before operating the receiver from the unit, the "Manual" key on the receiver's keyboard must first be pressed. Then, press the push-button on the Unit for the desired station and hold the button down until the station is tuned. Care must be taken not to hold two push-buttons down at one time, as both windings of the motor may be engaged simultaneously, causing the motor to be inoperative and overheated.

HOTPOINT-BANDMASTER 289 DE (Contd.)

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amplifier	--3.4*	100	250	8.0	6.3
6K8G Detector, M.W.	--5.0*	100	250	1.5	6.3
S.W.	--3.4*	100	250	2.0	- -
Oscillator, M.W.	- - -	- - -	100	2.8	- -
S.W.	- - -	- -	100	2.8	- -
6U7G I.F. Amplifier	3.4*	100	250	8.0	6.3
6B8G Det. and 1st Audio	--3.4*	35*	125*	0.5	6.3
6B8G Phase Inverter	--3.4*	35*	125*	0.5	6.3

Valve	Bias Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6F6G Pentode	--16.5*	250	240	35	6.3
6F6G Pentode	--16.5*	250	240	35	6.3
5V4G Rectifier	680/340 V.	130	M.A. total drain		5.0

* Cannot be measured with ordinary voltmeter.

Measured with controls at maximum clockwise. Supply voltage 240 volts A.C. No signal.

Tuning Motor Voltage (no load), 27 Volts A.C.

Tuning Motor Voltage (on load), 24 Volts A.C

HOTPOINT BANDMASTER 139DE

13 Valve, Three Band, Automatic Tuning, A.C. Operated Superheterodyne

TUNING RANGES:- "Standard Medium Wave" (A) 1600-550 K.C. "Short Wave" (B) 35-105M. "Short Wave" (C) 13-39M. R.F. ALIGNMENT SETTINGS:- "A" Band - 600 K.C. (Osc.), 1500K.C. (Osc.,R.F., Aer.). "B" Band - 38 metres (Osc.,R.F.,Aer.). "C" Band - 14 metres (Osc., R.F., Aer.). INTERMEDIATE FREQUENCY - 460 K.C. POWER CONSUMPTION (Tuning Motor Inoperative) - 135 watts.

VALVE COMPLEMENT - 1. 6U7G R.F. Amp. 2. 6K8G Mixer. 3. 6J7G Oscillator. 4. 6J7G Osc. Control. 5. 6U7G 1st I.F. Amp. 6. 6U7G 2nd I.F. Amp. 7. 6H6G 2nd det.,A.V.C., & A.F.C. 8. 6R7G 1st Audio Amp. 9. 6J7G 2nd Audio Amp. 10. 6J7G Phase Inverter. 11. 6V6G Output. 12. 6V6G Output. 13. 5V4G Rectifier. 6U5 Visual Tuning Indicator.

UNDISTORTED POWER OUTPUT - 13 watts. LOUDSPEAKER - 12 inch electro-dynamic (dustproof) Field Coil Resistance - 600 ohms.

CIRCUIT ARRANGEMENT.

The I.F. amplifier channel is of the variable selectivity type, in which variation of selectivity is obtained by switching in overcoupling windings (L19 and L22). These windings are in close proximity to their respective primary windings and are arranged to be switched in series with their respective secondary windings to give the desired increases in coupling and to produce the required changes in selectivity.

Each overcoupling winding is centre tapped so that two degrees of overcoupling are available on each of the two I.F. transformers, and combinations of these are used to obtain the desired effect. The switching of these windings is performed primarily by the fidelity switch, but the action of this switch, in regard to selectivity, is modified by the switch operating on the main tuning control knob.

The function of the switch on the main tuning control knob is to remove the overcoupling from the first I.F. transformer when pushed in, so that tuning can be satisfactorily performed, even though the fidelity switch be in a position which would normally give wide band width and consequent difficulty in tuning.

The function of the automatic frequency control circuit is to automatically change the frequency of the heterodyne oscillator, so that the correct intermediate frequency is formed for the I.F. amplifier. The circuit consists essentially of an I.F. discriminator, which furnishes a control voltage of the correct polarity to an oscillator frequency control valve for generated intermediate frequency carriers slightly above and below 460 K/cs. the frequency to which the I.F. amplifier is tuned.

The action of the discriminator circuit depends on the fact, that a 90 degree phase difference exists between the primary and secondary potentials of a double tuned, loosely coupled transformer, when the resonant frequency is applied; and that this phase difference varies as the applied frequency varies. That is, the maximum resultant response voltage across the primary and secondary windings, connected in series, will occur at a frequency, to one side of that to which the individual windings are resonated. Whether the frequency at which this maximum response occurs, is at a higher or lower frequency than that to which the individual circuits are tuned, depends on whether the windings are connected in series aiding or opposing.

The discriminator, or fourth I.F. transformer, consists of a primary winding L25, which is part of the third I.F. transformer secondary tuned circuit (tuned to 460 K/cs), and the centre tapped secondary L26. L27 may be considered as two secondary coils, the upper L26 series opposing, and the lower L27 series aiding, the primary L25.

The core in L26, L27 is inserted to inductively balance the two halves.

The function of the coil L28, in parallel with L26, L27 is to tune L26 L27, L28 and C50 to 460 K/cs. It is arranged that the maximum rectified voltage will appear across R25, when the intermediate signal frequency is above 460 K/cs, and across R26 and R28 in series, when below 460 K/cs. The resistors R25, R26 and R28 are connected in series, between ground and a point leading to the oscillator control valve grid.

D.C. voltages across R25 are always in opposition to those across R26 and R28. Consequently, the oscillator control valve grid bias voltage is always a differential amount, depending upon the I.F. signal strength, and its frequency deviation from the nominal value of 460 K/cs. The polarity of this differential bias, with respect to ground, depends upon whether the intermediate frequency signal is above or below 460 Kc/s, but is always in the direction which will bring the generated intermediate frequency nearer to 460 K/cs.

The visual tuning indicator 6U5 has its cathode connected to ground, through resistor R46, across which the minimum bias for the R.F. amplifier, first detector and I.F. amplifier valves is developed. The grid of the 6U5 is connected through R22 to the A.V.C. line, which is fed with A.V.C. voltage through R27, from the rectified voltage appearing across R26. When there is no signal present, the junction voltages of R25, R26 and R28, tend towards ground potential, the grid of the 6U5 draws current and holds the potential of the A.V.C. line at a value of --3.5 volts, which is the sum of the voltage drop across R46, and the grid to cathode contact voltage of the 6U5.

The fidelity switch, besides varying the selectivity of the I.F. channel, and controlling the operation of the A.F.C., also operates on the automatic station selection circuit and the audio frequency amplifying circuit.

In the motor circuit, the fidelity switch is arranged to open-circuit the 24-volt supply in the first two positions, as these two positions are intended for distant reception, and automatic station selection is, therefore, not required. This, however, does not affect the operation of the scanning buttons, which will still operate if the manual tuning button is pressed, or if the wave change switch is turned to either of the short wave bands.

In the audio frequency circuit, the fidelity switch operates in positions 1 and 3 to connect the condenser C64 to ground from the plate of the 6R7G, thus reducing the high frequency response in these positions.

A special two-section filter is used in the plate circuit of the 6R7G first audio amplifier, and this filter, consisting of L29, C60, C61, L30, C62 and C63, is of the low pass type with cut-off frequency commencing at a frequency of 7 Kc/s and having maximum suppression at 10 Kc/s. This operates to materially reduce 10 Kc/s heterodyne whistles and all frequencies above 10 Kc/s, which are generally associated with background noise.

Inverse feedback is used with this audio amplifier circuit, and it is essential that correct phase relationship be maintained, so that in the event of the output transformer being removed, it is essential that it be replaced with identical connections.

CAUTION.

The iron core screw L26, L27, on the bottom of the fourth I.F transformer, has been accurately adjusted for an exact electrical balance of coil L26, L27, to the centre tap during manufacture and should not be disturbed. However, if for any reason the adjustment has been moved from its original position, it will be necessary to mechanically adjust this screw until the end of the stud protrudes exactly $\frac{1}{16}$in. (two threads exposed) above the brass bushing, prior to any alignment operations.

HOTPOINT-BANDMASTER 139 DE (Contd.)

A.F.C. DISCRIMINATOR ADJUSTMENTS.

These adjustments are rather critical, and should be performed with extreme care. Improper adjustment may result in the oscillator control tube failing to function, or else may cause it to detune the oscillator circuit, instead of tuning it to the signal.

It is assumed that the iron core adjusting screw L28 (top of fourth I.F. transformer) has been turned all the way out (extreme anti-clockwise), prior to the preceding tabulated adjustments.

The adjustments are as follows:—

1. Set Fidelity Control in maximum anti-clockwise position.
2. Connect the test oscillator to the grid cap of the 6K8G first detector, and adjust the R.F. input (unmodulated) at 460 K.C. to obtain half to two-thirds closure of the tuning indicator. Carefully adjust the tuning of the test oscillator for maximum response of the tuning indicator. The most accurate adjustment will be obtained by adjusting the tuning control midway between the two points, where the eye just appears to start to open. The tuning adjustment of the test oscillator must remain perfectly undisturbed throughout the remainder of the procedure.
3. Replace the grid connector of the 6K8G first detector, and place the "high" test oscillator lead near the grid lead of the I.F. amplifier, but not wrapped around it, or the tuning of that circuit will be upset. Advance the R.F. output of the test oscillator to about 100 millivolts, which should cause no more than a barely perceptible response in the tuning indicator, if the coupling to the grid lead of the 6U7G is not too close.
4. Take another receiver of the Superheterodyne type, and set its dial pointer to 550 Kc/s., when its local oscillator should radiate at 1000 Kc/s., if the intermediate frequency is 460 Kc/s. Connect a wire to the aerial terminal of the Receiver, and place the other end of it near enough to the osciliator circuits of the other receiver to obtain half to two-thirds closure of the tuning indicator, as in 2 above, when the 1000 K.C. signal is tuned in. Simultaneously, a heterodyne beat-note will be heard, which is reduced to zero-beat at exact tune and maximum deflection of the Magic Eye.
5. Turn the Fidelity control to Position 3, and commence turning the iron core adjusting screw L28 clockwise, until the high beat note, which is heard, is reduced to zero-beat. Reset the fidelity control to maximum anti-clockwise position. Re-adjust the zero-beat as the control is thrown back and forth from "maximum anti-clockwise" to "third position." Adjustment of the discriminator circuit is then complete.

NOTE:—With the Fidelity control at position 3, operation of the tuning control of the Receiver will cause the above-mentioned beat note to slowly rise in frequency to about 2000 or 3000 cycles per second, and then suddenly disappear, after the dial pointer has moved through an interval of 15-20 K.C. in either direction from exact tune. The two points at which the A.F.C. circuits lose control should be roughly equidistant from the point of exact resonance; the intervals, at which control is regained, are about two-thirds of those at which control is lost. The interval, over which control is effective, is directly proportional to the amount of A.V.C. generated by the received signal. If the ratio of the two intervals on either side of resonance at which control is lost is greater than 1.5:1, the oscillator control 6J7G bias requires adjustment to centre the control action. The necessary procedure is described later.

NOTE:—In adjustment 4, a second test oscillator set to 1000 Kc/s. and unmodulated may be used, if available, in place of the second receiver. Failing either, the signal from a local station (preferably 550-1000 K.C.) may be used, but the presence of programme modulation causes a little difficulty in accurate determination of the zero-beat points.

OSCILLATOR CONTROL CIRCUIT ADJUSTMENTS.

This circuit should only seldom require attention, having been carefully adjusted in manufacture.

A 4.5 volt bias battery is required.

1. Set the Fidelity control at position 3, and volume control full on; other controls as before.
2. Connect a test oscillator at 1000 K.C. (30% modulated) to the grid cap of the 6K8G first detector, and adjust input to a low level, so that just comfortable response is obtained when the signal is tuned-in. Note carefully the dial reading of the Receiver.
3. Connect two leads to resistor R2 (500,000 ohms on panel No. 6684) and join them to the 4.5 v. bias battery. Retune the receiver to the signal and note the dial reading. Reverse the battery and take a third reading.

   The first reading should be midway between the two last, which should have a total separation of 20 to 30 Kc/s. If the ratio of the frequency differences between the first reading and each of the other two, is greater than 1.5 to 1, say, for example, 20 K.C. on one side and 12 Kc/s. the other, further adjustment is necessary.
4. If the first reading is on the high frequency side of the mid-point, between the two taken with the battery in circuit, shunt R6 (450 ohms cathode bias resistor of 6J7 oscillator control tube) with 5000 ohms or 2000 ohms as may be required. If the first reading is on the low frequency side, replace R6 with a larger value, such as 500 ohms.

• • • •

NOTE: For Adjustments for Automatic Tuning - Adjustment of Flywheel Friction Adjustment of Selector Disc - and Armchair Control Unit - see Model 289.DE.

SOCKET VOLTAGES.

Valve	Cathode to Chass. Volts	Control Grid to Chass. Volts	Screen Grid to Chass. Volts	Plate to Chass. Volts	Plate Current M.A.	Heater Volts
6U7G R.F. Amplifier	0	—3.5*	98	250	7.2	6.3
6K8G Mixer, Band A	4.5	—3.5*	100	250	1.0	6.3
,, B	2.5	—3.5*	100	250	1.0	6.3
,, C	2.5	0	100	250	1.5	6.3
6J7G Oscil., Band A	0	0	135	145	3.5	6.3
,, B	0	0	140	170	3.0	6.3
,, C	0	0	145	160	3.2	6.3
6J7G Oscil. Control Band A	4.4	0	100	235	1.1	6.3
,, B	4.2	0	100	240	0.8	6.3
,, C	4.2	0	100	240	0.8	6.3
6U7G 1st I.F. Amplifier	0	—3.5*	98	170	7.2	6.3
6U7G 2nd I.F. Amplifier	0	—3.5*	100	250	7.2	6.3
6H6G 2nd Detector, A.V.C. and A.F.C.	0	—	—	0	—	6.3

Valve	Cathode to Chass. Volts	Control Grid to Chass. Volts	Screen Grid to Chass. Volts	Plate to Chass. Volts	Plate Current M.A.	Heater Volts
6P7G 1st Audio Amp.	0	—5.5*	—	100*	1.5	6.3
6J7G 2nd Audio Amp.	0	—5.5*	†	125*	1.25	6.3
6J7G Phase Inverter	0	—5.5*	†	125*	1.25	6.3
6V6G Output	20.0	0	300	290	36.0	6.3
6V6G Output	20.0	0	300	290	36.0	6.3
5V4G Rectifier	770/385 volts A.C. 130 M.A. total current 5.0					

Tuning Motor Voltage (no load), 27.0 volts A.C.

Tuning Motor Voltage (on load), 24.0 volts A.C.

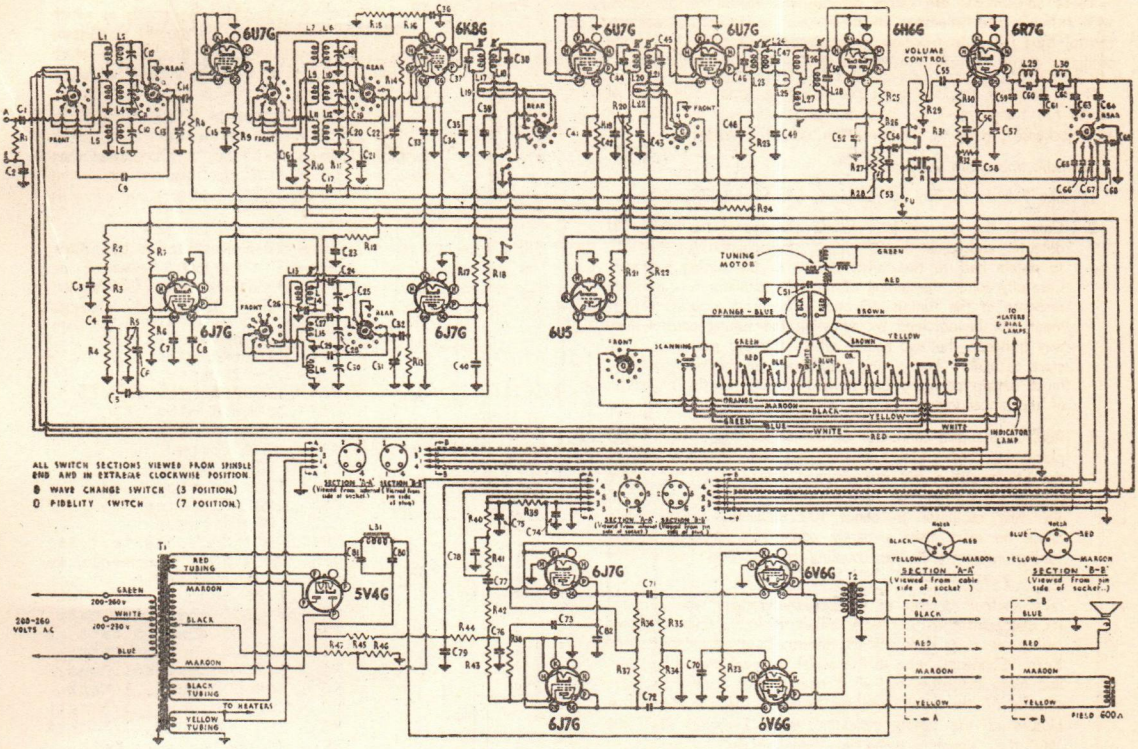
Voltage across loudspeaker field, 100 volts D.C.

Measured at 240 volts A.C. supply. No signal input. Controls in maximum clockwise position excepting range switch, which is set as desired.

* Cannot be measured with ordinary voltmeter.

† Connected to Plate.

HOTPOINT-BANDMASTER 139 DE (Contd.)



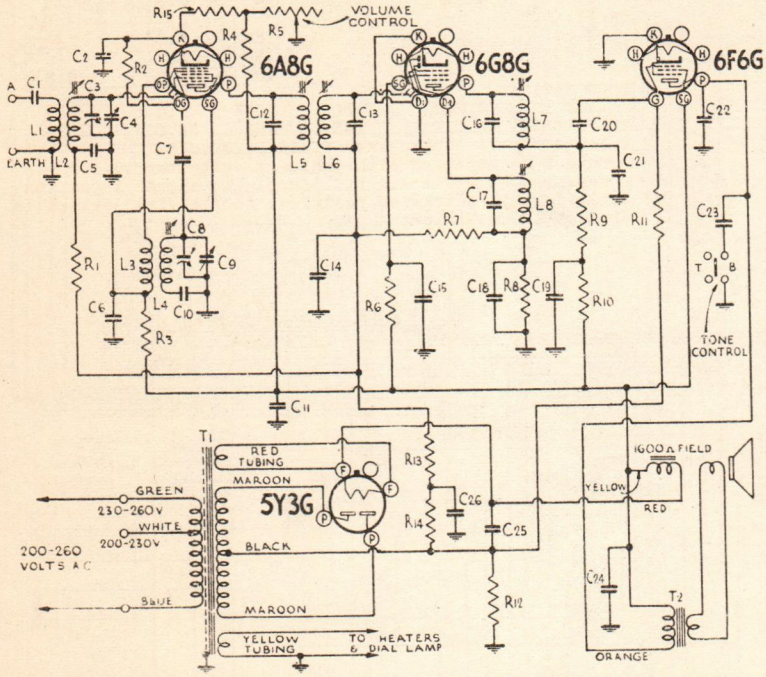
R1	100,000 ohms, 1/3 watt
R2	500,000 ohms, 1/3 watt
R3	1.75 megohms, 1/3 watt
R4	100,000 ohms, 1/3 watt
R5	100 ohms, 1/3 watt
R6	450 ohms, 3 watt
R7	11,000 ohms, 3 watt
R8	500,000 ohms, 1/3 watt
R9	900 ohms, 1/3 watt
R10	600 ohms, 1/3 watt
R11	100,000 ohms, 1/3 watt
R12	10,000 ohms, 1 watt
R13	50,000 ohms, 1/3 watt
R14	50,000 ohms, 1/3 watt
R15	300 ohms, 1/3 watt
R16	300 ohms, 1/3 watt
R17	70,000 ohms, 1 watt
R18	30,000 ohms, 1 watt
R19	900 ohms, 1/3 watt
R20	15,000 ohms, 2 watts
R21	1.0 megohm, 1 watt
R22	250,000 ohms, 1/3 watt
R23	600 ohms, 1/3 watt
R24	7,000 ohms, 5 watts
R25	500,000 ohms, 1/3 watt
R26	200,000 ohms, 1/3 watt
R27	1.75 megohms, 1/3 watt
R28	300,000 ohms, 1/3 watt
R29	1.0 megohm, Vol. Cntrl.
R30	1.75 megohms, 1/3 watt
R31	250,000 ohms, 1/3 watt
R32	100,000 ohms, 1/3 watt
R33	240 ohms, 3 watt
R34	250,000 ohms, 1/3 watt
R35	250,000 ohms, 1/3 watt
R36	100,000 ohms, 1 watt
R37	100,000 ohms, 1 watt
R38	500,000 ohms, 1/3 watt
R39	1,000 ohms, 3 watt
R40	50,000 ohms, 1 watt
R41	50,000 ohms, 1 watt
R42	1 megohm, 1/3 watt
R43	35,000 ohms, 1/3 watt
R44	250,000 ohms, 1/3 watt
R45	500,000 ohms, 1/3 watt
R46	20 ohms, 3 watt
R47	20 ohms, 3 watt

Code No.	CONDENSERS
C1	500 mmfd., Mica
C2	500 mmfd., Mica
C3	0.05 mfd., Paper
C4	200 mmfd., Mica (J)
C5	200 mmfd., Mica (J)
C6	350 mmfd., Mica
C7	0.1 mfd., Paper
C8	8 mfd., 450V., Electrolytic
C9	4 mmfd., Mica
C10	11-29 mmfd., Air Trim.
C11	2-20 mmfd., Air Trim.
C12	2-20 mmfd., Air Trim.
C13	Tuning Condenser
C14	350 mmfd., Mica
C15	0.1 mfd., Paper
C16	0.1 mfd., Paper
C17	4 mmfd., Mica
C18	2-20 mmfd., Air Trim.
C19	2-20 mmfd., Air Trim.
C20	11-29 mmfd., Air Trim.
C21	0.05 mfd., Paper
C22	Tuning Condenser
C23	8 mfd., 450V., Electrolytic
C24	450 mmfd. (Padder temp. comp.)
C25	2-20 mmfd., Air Trim.
C26	0.5 mfd., Paper
C27	2,250 mmfd., Mica (Padder)
C28	2-20 mmfd., Air Trim.
C29	5,400 mmfd., Mica (Padder)
C30	9-29 mmfd., Air Trim.
C31	Tuning Condenser
C32	110 mmfd., Mica (L)
C33	110 mmfd., Mica (L)
C34	0.25 mfd., Paper
C35	0.05 mfd., Paper
C36	0.1 mfd., Paper
C37	250 mmfd., Mica
C38	250 mmfd., Mica
C39	0.05 mfd., Paper
C40	0.05 mfd., Paper
C41	0.1 mfd., Paper
C42	0.1 mfd., Paper
C43	0.05 mfd., Paper
C44	250 mmfd., Mica
C45	250 mmfd., Mica
C46	100 mmfd., Mica
C47	100 mmfd., Mica
C48	0.05 mfd., Paper
C49	110 mmfd., Mica (L)
C50	100 mmfd., Mica
C51	60 mfd., Non-Polarised Elect.
C52	0.5 mfd., Paper
C53	110 mmfd., Mica (L)
C54	0.025 mfd., Paper
C55	0.025 mfd., Paper
C56	0.25 mfd., Paper
C57	0.01 mfd., Paper
C58	0.25 mfd., Paper
C59	1500 mmfd., Mica
C60	680 mmfd., Mica
C61	1500 mmfd., Mica
C62	990 mmfd., Mica
C63	680 mmfd., Mica
C64	0.025 mfd., Paper
C65	0.003 mfd., Paper
C66	0.006 mfd., Paper
C67	0.01 mfd., Paper
C68	0.05 mfd., Paper
C69	0.02 mfd., Paper
C70	25 mfd., 25v., Electrolytic
C71	0.1 mfd., Paper
C72	0.025 mfd., Paper
C73	0.01 mfd., Paper Condenser
C74	16 mfd., 550V., Electrolytic
C75	8 mfd., 500V., Electrolytic
C76	0.25 mfd., Paper
C77	0.0025 mfd., Paper
C78	0.25 mfd., Paper
C79	0.25 mfd., Paper
C80	16 mfd., 550V., Electrolytic
C81	16 mfd., 550V., Electrolytic
C82	0.005 mfd., Paper

HOTPOINT-BANDMASTER 649 ME

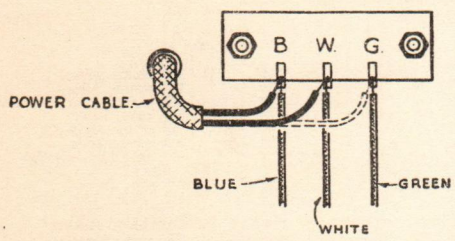
4-Valve, Medium Wave, A.C. Operated Superheterodyne

Tuning Frequency Range - 1500-550 K.C. R.F. Alignment Frequencies - 600 K.C. & 1400 K.C. Intermediate Frequency - 460 K.C. Power Consumption - 50 watts. Loudspeaker Field Coil Resistance - 1600 ohms.
VALVE COMPLEMENT - 1. 6A8G Detector-Oscillator. 2. 6G8G I.F. amp., 2nd Det., A.V.C. & A.F. amp. 3. 6F6G Output pentode. 4. 5Y3G Rectifier.



C1 - 500mmfd mica
C2 - .1mfd paper
C3 - 2-10 mmfd air trimmer
C4 - Tuning Condenser
C5 - .05mfd paper
C6 - .1mfd paper
C7 - 110 mmfd mica (L)
C8 - 16-24mmfd air trimmer
C9 - Tuning Condenser
C10- 440mmfd mica (Padder)
C11- .1mfd paper
C12 - 115mmfd mica (A)
C13- 130 mmfd mica (H)
C14- 110mmfd mica (L)
C15- .1mfd paper
C16- 115mmfd mica (A)
C17- 130mmfd mica (H)
C18- 110mmfd mica (L)
C19- .1mfd paper
C20- .01mfd paper
C21- 700mmfd mica
C22- .005mfd paper
C23- .02mfd paper
C24- 8mfd 500V Electrolytic
C25- 8mfd 500V Electrolytic
C26- .1mfd paper
R1 - 1.75 megohms, 1/3 Watt
R2 - 60,000 ohms, 1/3 Watt
R3 - 11,000 ohms, 3 Watt
R4 - 25,000 ohms, 3 Watt
R5 - 3,000 ohms, Vol.Cont.
R6 - 500,000 ohms, 1 Watt
R7 - 250,000 ohms, 1/3 Watt
R8 - 200,000 ohms, 1/3 Watt
R9 - 70,000 ohms, 1 Watt
R10- 20,000 ohms, 1 Watt

R11- 500,000 ohms,1/3 Watt R12- 300 ohms,3 Watt R13- 5 meg. 1 Watt
R14- 500,000 ohms,1/3 Watt R15- 200 ohms, 1/3 Watt



Showing Power Cable Connections for Line Voltages below 230V. (dotted lead indicates "standard" connection).

VALVE	BIAS VOLTAGES	SCREEN GRID VOLTS	PLATE VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6A8G Detect.-Oscillator	-1.5‡ -	2.5† 120 -	250 120	3.5 3.5	6.3 -
6G8G Reflex Amplifier	-1.5‡	50*	97*	1.7	6.3
6F6G Pentode	-17.0‡	250	225	26.0	6.3
5Y3G Rect. 680/340 volts,60M.A. Total current.					5.0

Voltage across loudspeaker field - 96 volts.

* Cannot be measured with ordinary voltmeter.
‡ Control Grid to chassis. Cannot be measured with ordinary voltmeter.
† Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control in maximum clockwise position.

HOTPOINT-BANDMASTER

4-Valve, Two Band, D.C. Operated Superheterodyne, Mantel

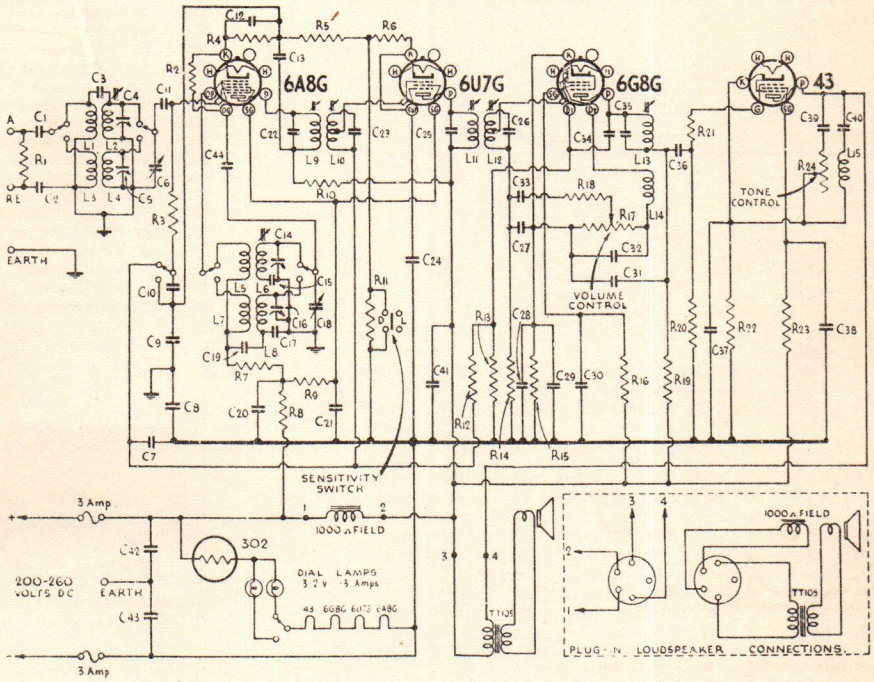
Tuning Frequency Ranges - Medium Wave "A" 1500-550 K.C. Short Wave"B" 16-50M. R.F. Alignment Frequencies - Medium Wave 600 K.C. 1400 K.C. Short Wave 18 M. Intermediate Freq. 460 K.C. Power Supply Rating - 200-260 Volts, D.C. VALVE COMPLEMENT - 1. 6A8G Detector-Osc. 2. 6U7G I.F. Amp. 3.6G8G I.F. Amp., 2nd Det., A.V.C. & A.F. Amp. 4. 43 Output Pentode Loudspeaker Field Coil Res.-1000 ohms.

R1 - 100,000 ohm 1/3 Watt
R2 - 40,000 ohms 1/3 Watt
R3 - 500,000 ohm 1/3 Watt
R4 - 300 ohms 1/3 Watt
R5 - 200 ohm 1/3 Watt
R6 - 400 ohm 1/3 Watt
R7 - 400 ohm 1/3 Watt
R8 - 10,000 ohm 1 Watt
R9 - 20,000 ohm 1Wat
R10- 600 ohm 1/3W
R11- 2,000 ohm "
R12- 1.75 meg. "
R13- " " "
R14- " " "
R15- 2,000 ohm "
R16- 500,000 ohms 1 Watt
R17- 500,000 ohms Vol.Control
R18- 500,000 ohms 1/3 Watt
R19- 70,000 ohms 1 Watt
R20- 500,000 ohm 1/3 Watt
R21- 100,000 ohm 1/3 Watt
R22- 500 ohms 1 Watt
R23- 5,000 ohms 1 Watt
R24- 100,000 ohms Tone Control
C1 - 500mmfd mica
C2 - " " "
C3 - 4mfd mica
C4 - Air Trimmer 2-10mmfd
C5- Air Trim.2-20 mmfd
C6- Tuning Cond.
C7 - .05mfd pap.
C8 - .5mfd pap.
C9 - .1mfd pap.
C10- .1mfd pap.
C11- 350mmfd mica
C12- .1mfd paper
C13- .1mfd paper
C14- 16-34mmfd Air Trimmer
C15- 440mmfd mica (Padder)
C16- 2-10mmfd Air Trimmer
C17- 3500mmfd mica (Padder)
C18- Tuning Cond.
C19- .05mfd paper
C20- 5mfd paper
C21- .1mfd paper
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- .1mfd paper
C25- 115mmfd mica (A)
C26- 130mmfd mica (H)

C27- 110mmfd mica (L)
C28- 25mfd 25V Elect.
C29- .02mfd paper
C30- .1mfd paper
C31- 700mmfd mica
C32- 110mmfd mica (L)
C33- .01mfd paper
C34- 50mmfd mica (D)
C35- 70mmfd mica (N)
C36- .01mfd paper
C37- 25mfd 25V Elect.
C38- .5mfd paper
C39- .035mfd paper
C40- 3500mmfd mica
C41- 5mfd paper
C42- .1mfd paper
C43- .1mfd paper
C44- 110mmfd mica (L)

VALVE	CATHODE TO NEGATIVE VOLTS	SCREEN GRID TO NEG. VOLTS	PLATE TO NEG. VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6A8G Detect.					
M.W.	3.75	70	180	1.5	6.3
S.W.	4.25	70	180	2.5	-
Oscillator					
M.W.		-	155	4.0	-
S.W.		-	155	3.7	-
6U7G I.F.Amp.	2.75	70	180	5.0	6.3
6G8G Reflex					
Amp.	2.25	30	105*	1.0	6.3
43 Pentode	20.0	145	165	38.0	25.0

Voltage across loudspeaker field 54.0 volts
*Cannot be measured with ordinary voltmeter.
Measured at 240 volts D.C. Supply no signal input. Controls in max. clockwise position. Sensitivity switch in distant (D) position.



Some receivers have C38 connected from screen grid 43 to negative, others of later production have C38 connected between screen grid and cathode.

HOTPOINT-BANDMASTER 449MV

4-Valve, Medium Wave, Battery Operated Superheterodyne

Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C.,
Intermediate Frequency - 460 K.C.

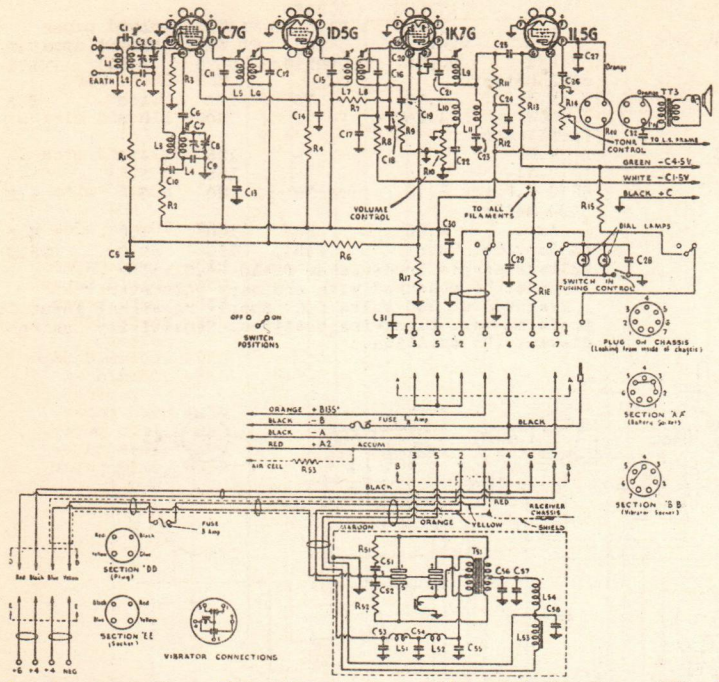
Current Consumption.	"B" Battery Operation	Vibrator Operation
"A" Battery at 2 volts	0.54 amps.	
"A" Battery at 6 volts		1.2 amps.
"B" Battery at 135 volts	14 M.A.	(Supplied from Vibrator Power Unit)

VALVE COMPLEMENT - 1. 1C7G Detect.-Osc. 2. 1D5G I.F. Amp. 3. 1K7G I.F. Amp. Det., A.V.C. and A.F. Amp. 4. 1L5G Output Pentode.
NOTE: The plate supply may be from dry "B" batteries or from a Vibrator Power Unit. Instructions for changing from one to the other are given further on.

VALVE	Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
1C7G Detector	0	35	135	1.0	2.0
Oscillator	-	-	60	1.5	-
1D5G I.F. Amp.	0	35	135	1.5	2.0
1K7G Reflex Amp.	-1.5*	60*	85*	0.4	2.0
1L5G Pentode	-4.5*	135	130	6.5	2.0

*Cannot be measured with ordinary voltmeter.
Measured with Volume Control at maximum. No signal.

HOTPOINT-BANDMASTER 449MB

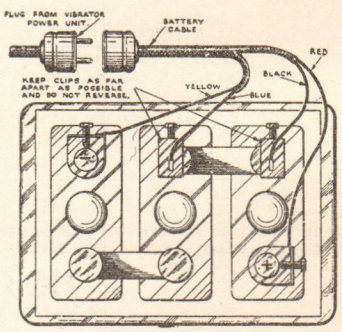


Vibrator Power Unit.
R51 - 50 ohms 1/3 Watt
R52 - 50 ohms 1/3 Watt
C51 - .02mfd paper
C52 - .02mfd paper
C53 - .1mfd paper
C54 - .25mfd paper
C55 - .25mfd paper
C56 - 8mfd 450V electrolytic
C57 - .02mfd paper
C58 - .5mfd paper

R1 - 100,000 ohms 1/3 Watt
R2 - 50,000 ohms 1 Watt
R3 - 60,000 ohms 1/3 Watt
R4 - 70,000 ohms 1 Watt
R5 - Deleted
R6 - 1.75 meg. 1/3 Watt
R7 - 500,000 ohms 1 Watt
R8 - 1.75 meg. 1/3 Watt
R9 - 500,000 ohms 1/3 Watt
R10- 500,000 ohms Vol.Control
R11- 100,000 ohms 1 Watt
R12- 20,000 ohms 1 Watt
R13- 500,000 ohms 1/3 Watt
R14- 100,000 ohms Tone Cont.
R15- 750 ohms 1 Watt
R16- 4.5 ohms wire wound
R17- 2.3 meg. 1/3 Watt
C1 - 4mmfd mica
C2 - 2-10mmfd Air Trimmer
C3 - Tuning Condenser
C4 - .05mfd paper
C5 - .05mfd paper
C6 - 110mmfd mica (L)
C7 - 16-34mmfd Air Trimmer

C8 - Tuning Cond.
C9 - 440mmfd mica (Padder)
C10- .05mfd paper
C11- 115mmfd mica (A)
C12- 130mmfd mica (H)
C13- .1mfd paper
C14- .1mfd paper
C15- 115mmfd mica (A)
C16- 130mmfd mica (H)
C17- 110mmfd mica (L)
C18- .1mfd paper.
C19- .02mfd paper
C20- 50mmfd mica (D)
C21- 70mmfd mica (N)
C22- 110mmfd mica (L)
C23- 700mmfd mica
C24- .5mfd paper
C25- .05mfd paper
C26- .035mmfd paper
C27- .0025mmfd pap
C28- .5mfd paper
C29- 450mmfd mica
C30- 8mfd 450V elec.
C31- 450mmfd mica
C32- .02mfd paper

CONVERSION FROM "B" BATTERY TO VIBRATOR POWER UNIT OPERATION.
To convert from "B" battery operation to vibrator power unit operation, proceed as follows:- (a) Disconnect the battery cable from the chassis and remove the "A" and "B" batteries.
(b) Place the vibrator power unit in the lower compartment of the cabinet, where holes are provided for mounting, and mount, using the screws supplied. (c) Connect the vibrator power unit socket to the plug on the chassis, and connect the braiding attached to the cable to the screw on the chassis marked earth.
CONVERSION FROM VIBRATOR POWER UNIT TO BATTERY OPERATION .
To convert from vibrator power unit operation to "B" battery operation proceed as follows:- (a) Disconnect the vibrator power unit cable from the chassis and disconnect and remove the accumulator. (b) Remove the vibrator power unit from the cabinet.
(c) Connect the battery cable socket to the plug on the chassis, and refer to the circuit diagram for battery connections.

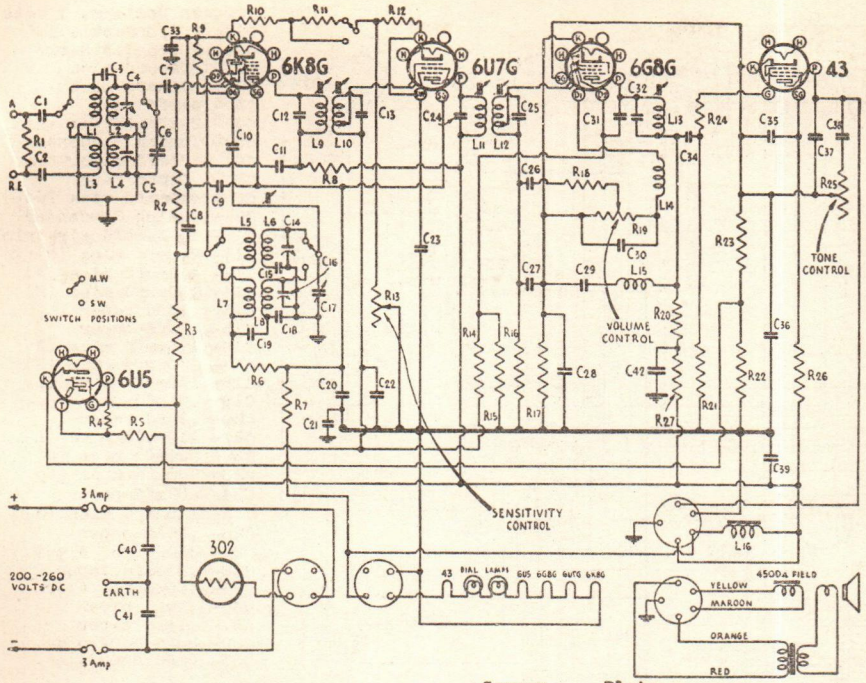


HOTPOINT-BANDMASTER 449DD

4-Valve, Two Band, D.C. Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (b) 16-50 M. R.F. Alignment Freq. - (a) 600 K.C., 1400 K.C. 1500 K.C. (b) 18 M. Intermediate Freq. - 460 K.C. Power Consumption - 90 watts.
Loudspeaker Field Resistance - 4500 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq. Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,Det., A.V.C. and A.F. Amp. 4. 43 Output Pentode. 6U5 Visual Tuning Indicator. 302 Barretter.

R1 - 100,000 ohms 1/3 Watt
R2 - 500,000 ohms 1/3 Watt
R3 - 100,000 ohms 1/3 Watt
R4 - 1 meg. 1 Watt
R5 - 20,000 ohms 1W
R6 - 600 ohms 1/3W
R7 - 15,000 ohms 2W
R8 - 600 ohms 1/3W
R9 - 50,000 ohms 1/3 Watt
R10- 500 ohms 1/3W
R11- 200 ohms 1/3W
R12- 600 ohms 1/3W
R13- 3,000 ohms,Sens. Control
R14- 1.75meg. 1/3W
R15- 2.3 meg.1/3W
R16- 2.3 meg.1/3W
R17- 2,000 ohms 1/3 Watt
R18- 500,000 ohms 1/3 Watt
R19- 500,000 ohms Vol.Cont.
R20- 200,000 ohms 1 Watt
R21- 500,000 ohms 1/3 Watt
R22- 50 ohms 1/3W
R23- 400 ohms 3Watt
R24- 100,000 ohms 1/3W
R25- 100,000 ohms Tone Control
R26- 10,000 ohms 1W
R27- 30,000 ohms 1W
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trimmer
C5 - 2-20mmfd air trimmer
C6 - Tuning Cond.
C7 - 350mmfd mica
C8 - .05mfd paper
C9 - .1mfd paper
C10- 70mmfd mica (N)
C11- .1mfd paper
C12- 115mmfd mica (A)
C13- 130mmfd mica (H)
C14- 16-34 mmfd air Trimmer
C15- 440mmfd mica (Padder)
C16- 2-10mmfd Air trimmer
C17- Tuning Cond.
C18- 3500mmfd mica (padder)
C19- .05mfd paper
C20- 5mfd paper
C21- .5mfd paper
C22- .05mfd paper
C23- .1mfd paper
C24- 115mmfd mica (A)
C25- 130mmfd mica (H)



C26- .01mfd paper
C27- 110mmfd mica (L)
C28- 25mfd 25V Elect.
C29- 115mmfd mica (A)
C30- 110mmfd mica (L)
C31- 50mmfd mica (D)
C32- 70mmfd mica (N)
C33- .1mfd paper
C34- .01mfd paper
C35- .5mfd paper
C36- 25mfd 25V elect.
C37- .005mmfd pap
C38- .035mfd paper
C39- 5mfd paper
C40- .1mfd paper
C41- .1mfd paper
C42- .5mfd paper

VALVE	Cathode to Neg. Volts	Screen Grid to Negative Volts	Plate to Negative Volts	Plate Current M.A.	Heater Volts
6K8G Pentode M.W.	5.5	90	225	0.6	6.3
S.W.	4.5	90	225	1.0	-
Oscillator	-	-	90	3.0	-
6U7G I.F. Amplifier	3.5	90	225	4.7	6.3
6G8G Reflex Amplifier	-	20*	85*	0.6	6.3
43 Output Pentode	20.0	150	200	35	25.0

* Cannot be measured with ordinary voltmeter.
Measured at 240 volts D.C. supply. No signal.
Controls maximum clcokwise

HOTPOINT-BANDMASTER 459ME

5-Valve, Medium Wave, A.C. Operated Superheterodyne

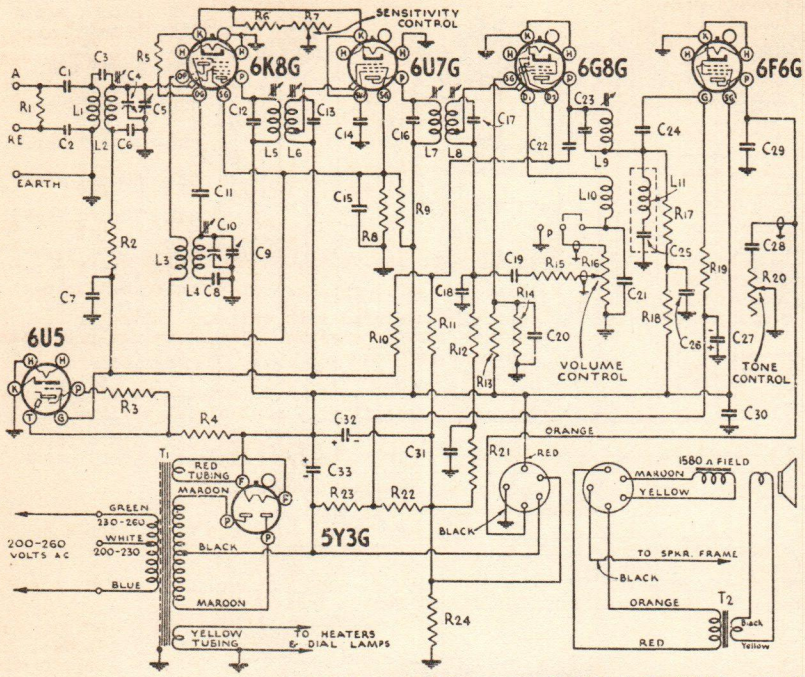
Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C. 1500 K.C. Intermediate Freq. - 460 K.C. Power Consumption 60 watts. Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq. Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,Det.,A.V.C. and A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 1meg. 1 Watt
R4 - 20,000 ohms 1 Watt
R5 - 50,000 ohms 1/3 Watt
R6 - 200 ohms 1/3 Watt
R7 - 3,000 ohms Sens.Cont.
R8- 20,000 ohms 1 Watt
R9 - 11,000 ohms 3 Watt
R10- 1.75meg. 1/3 Watt
R11- 2.3meg. 1/3 Watt
R12- 2.3 meg. 1/3 Watt
R13- 1meg. 1 Watt
R14- 100,000 ohms 1 Watt
R15- 500,000 ohms 1/3 Watt
R16- 500,000 ohms Vol.Control
R17- 150,000 ohms 1 Watt
R18- 20,000 ohms 1 Watt
R19- 500,000 ohms 1/3 Watt
R20- 100,000 ohms Tone Control
R21- 300,000 ohms 1/3 Watt

SOCKET VOLTAGES

VALVE	BIAS VOLTS	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detect.	1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amplifier	1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amplifier	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17	250	230	33	6.3
5Y3G Rectifier	720/360 volts, 65 m.a. total current 5.0				

Voltage across Loudspeaker field - 100 volts
* Cannot be measured with ordinary voltmeter.
‡ Control Grid to chassis. Cannot be measured with ordinary voltmeter.
† Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input.
Volume control & sensitivity at maximum.

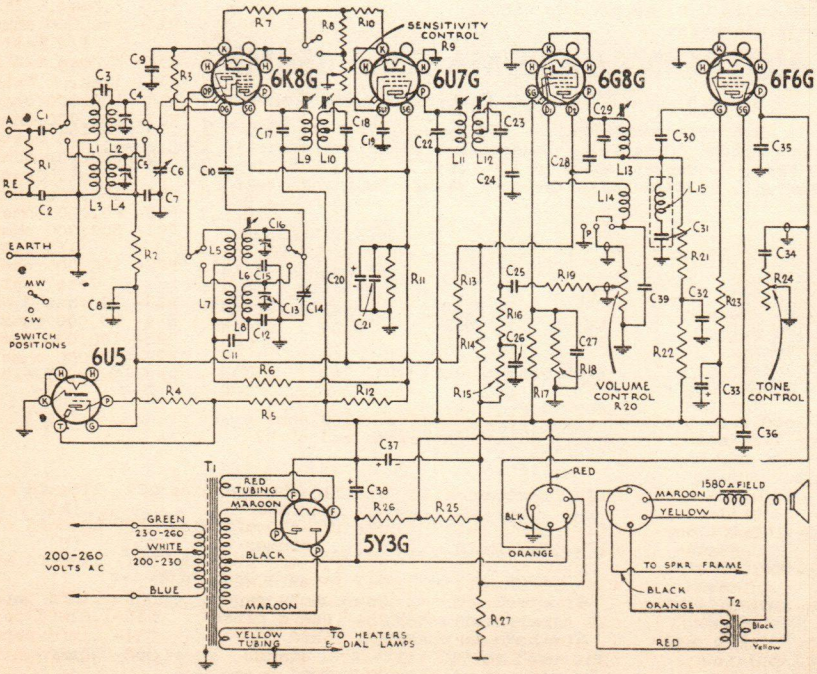


R22- 20,000 ohms 1 Watt
R23- 100,000 ohms 1 "
R24- 20 ohms 3 Watt
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trim.
C5 - Tuning Condenser
C6 - .05mfd paper
C7 - .05mfd paper
C8 - 440mmfd mica Pad.
C9 - Tuning Condenser
C10- 16-34mmfd air trim.
C11- 70mmfd mica (N)
C12- 115mmfd mica (A)
C13- 130mmfd mica (H)
C14- .1mfd paper
C15- .1mfd paper
C16- 115mmfd mica (A)
C17- 130mmfd mica (H)
C18- 110mmfd mica (L)
C19- .01mfd paper
C20- .1mfd paper
C21- 110mmfd mica (L)
C22- 50mmfd mica (D)
C23- 70mmfd mica (N)
C24- .02mfd paper
C25- 115mmfd mica (A)
C26- .5mfd paper
C27- 25mfd 25V elect.
C28- .035mfd paper
C29- .0025mfd paper
C30- .1mfd paper
C31- .1mfd paper
C32- 8mfd 500V elec.
C33- 8mfd 500V elec.

HOTPOINT-BANDMASTER 459DE

5-Valve, Two Band, A.C. Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (B) 16-50 M. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C., 18M. Intermediate Freq. - 460 K.C. Power Consumption - 60 watts.
Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq.Converter. 2. 6U7G I.F. Amp., 3. 6G8G I.F.Amp.Det.AVC & A.F.Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.



R1 - 100,000 ohms 1/3W
R2 - 100,000 ohms " "
R3 - 50,000 ohms 1/3W
R4 - 1meg. 1 Watt
R5 - 20,000 ohms 1W
R6 - 600 ohms 1/3W
R7 - 200 ohms 1/3Watt
R8 - 100 ohms 1/3Watt
R9 - 3,000 ohms Sens. Control
R10- 200 ohms 1/3Watt
R11- 20,000 ohms 1Watt
R12- 11,000 ohms 3Watt
R13- 1.75meg.1/3 Watt
R14- 2.3 meg. 1/3 Watt
R15- 300,000 ohms 1/3W
R16- 2.3meg. 1/3 Watt
R17- 1meg. 1 Watt
R18- 100,000 ohms 1W
R19- 500,000 ohms 1/3W
R20- 500,000 ohms Vol. Control
R21- 150,000 ohms 1Wat
R22- 20,000 ohms 1Watt
R23- 500,000 ohms 1/3W
R24- 100,000 ohms Tone Control
R25- 20,000 ohms 1Watt
R26- 100,000 ohms " "
R27- 20 ohms 3 Watt
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trim
C5 - 2-20mmfd air trim
C6 - Tuning condenser
C7 - .05mfd paper
C8 - .05mfd paper
C9 - .05mfd paper

HOTPOINT-BANDMASTER 459DE (Contd.)

C10- 70mmfd mica (N)
C11- .05mfd pap.
C12- 3500mmfd mica Pad.
C13- 2-10mmfd air trimmer
C14- Tuning Con.
C15- 440mmfd mica Pad.
C16- 16-34mmfd air trimmer
C17- 115mmfd mica (A)
C18- 130mmfd mica (H)
C19- .05mfd pap.
C20- 16mfd 500V elect.
C21- .1mfd pap.
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- 110mmfd mica (L)
C25- .01mfd paper
C26- .1mfd paper
C27- .1mfd paper
C28- 50mmfd mica (D)
C29- 70mmfd mica (N)
C30- .02mfd pap
C31- 115mmfd mica(A)
C32- .5mfd pap.
C33- 25mfd 25V elect.
C34- .035mfd pap.
C35- .0025mfd pap.
C36- .1mfd paper
C37- 16mfd 500V elect.
C38- 16mfd 500V elect.
C39- 110mmfd mica (L)

VALVE	BIAS VOLTS	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Heater Volts
6K8G Detect.					
M.W.	-1.2‡2.6†	100	250	1.0	6.3
S.W.	-1.2‡1.2†	100	250	0.9	-
Oscill.	-	-	100	2.5	-
6U7G I.F.Amp.					
M.W.	-1.2‡2.6†	100	250	5.0	6.3
S.W.	-1.2‡1.4†	100	250	6.0	-
6G8G Reflex Amp.	- 1.2	16*	165*	0.47	6.3
6F6G Pent.-	17.0	250	230	33.0	6.3
5Y3G Rect.	720/360 Volts, 65 m.a. total current				5.0

Voltage across loudspeaker field - 100 volts.

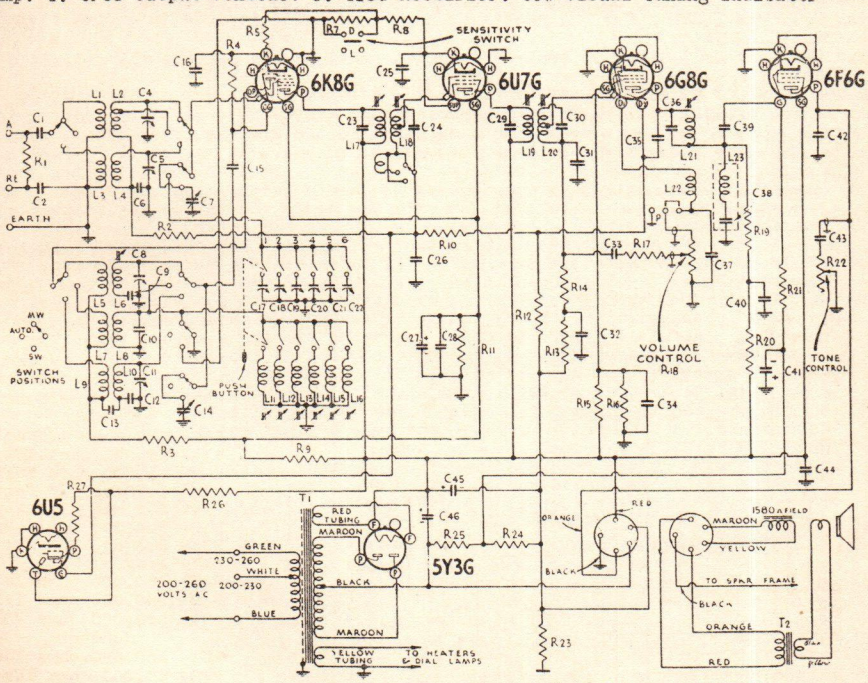
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to Chassis.
Measured at 240 volts A.C. supply. No signal input. Volume and sensitivity controls at maximum.

HOTPOINT-BANDMASTER A459DE

5-Valve, Two Band, Automatic and Manually Tuned A.C. Operated Superheterodyne

5 Valv

Tuning Ranges - (A) 1500-550 K.C. (b) 16-50M. R.F. Alignment Freq. - (A) 600 K.C., 1400 K.C. 1500 K.C. (B) 18M. Intermediate Freq.- 460 K.C. Power Consumption - 60 Watts.
Loudspeaker Field Resistance - 1580 ohms.
VALVE COMPLEMENT - 1. 6K8G Freq.Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F.Amp.,Det, A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator



R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 600 ohms 1/3W
R4 - 50,000 ohms 1/3 Watt
R5 - 200 ohms 1/3W
R6 - Deleted
R7 - 2,000 ohms 1/3W
R8 - 200 ohms 1/3W
R9 - 11,000 ohms 3W
R10- 1.75meg.1/3W
R11- 20,000 ohms 1W
R12- 2.3meg.1/3W
R13- 300,000 ohms 1/3 Watt
R14- 2.3meg.1/3 W
R15- 1meg. 1 Watt
R16- 100,000 ohms1W
R17- 500,000 ohms 1/3 Watt
R18- 500,000 ohms Vol. Cont.
R19- 150,000 ohms1W
R20- 20,000 ohms 1W
R21- 500,000 ohms 1/3 Watt
R22- 100,000 ohms Tone Cont.
R23- 20 ohms 3 Watt
R24- 20,000 ohms 1W
R25- 100,000 ohms1W
R26- 20,000 ohms 1W
R27- 1meg. 1 Watt

Circuit Modification - Receivers produced after 16/11/38 have a 100 ohms resistor inserted in the lead which previously joined the earth end of R7 to chassis.

C1 - 500mmfd mica
C2 - " " "
C3 - Deleted
C4 - 2-20mmfd air trimmer
C5 - 2-20mmfd air trimmer
C6 - .05mfd pap
C7 - Tun.Cond.
C8 - 16-34mmfd air trimmer
C9 - 440mmfd mica padder
C10- 100mmfd compensator
C11- 2-10mmfd air trimmer
C12- 3500mmfd mica padder
C13- .05mfd paper
C14- Tun.Cond.
C15- 70mmfd mica (N)
C16- .05mfd pap
C17- 30-180mmfd mica trimmer
C18- 30-180mmfd mica trimmer
C19- 65-280mmfd mica trimmer
C20- 65-280mmfd mica trimmer
C21- 120-470mmfd mica trimmer
C22- 120-470mmfd mica trimmer
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)
C25- .05mfd paper
C26- .05mfd paper
C27- 16mfd 500V elect.
C28- .1mfd paper
C29- 115mmfd mica (A)
C30- 130mmfd mica (H)
C31- 110mmfd mica (L)
C32- .1mfd paper
C33- .01mfd paper
C34- .1mfd paper
C35- 50mmfd mica (D)

C36- 70mmfd mica (N)
C37- 110mmfd mica (L)
C38- 115mmfd mica (A)
C39- .02mfd paper
C40- .5mfd paper
C41- 25mfd 25V electrolytic
C42- .0025mfd paper
C43- .035mfd paper
C44- .1mfd paper
C45- 16mfd 500V elect.
C46- 16mfd 500V electrolytic

VALVE	BIAS VOLTS	SCREEN GRID TO CHASSIS VOLTS	PLATE TO CHASSIS VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6K8G Detector	-1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amp.	-1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amp.	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17.0	250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 m.a. total current.				5.0

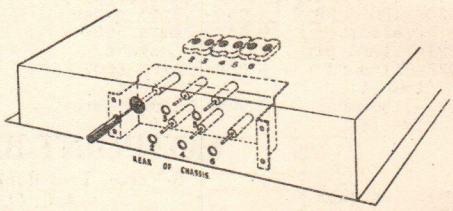
Voltage across loudspeaker field, 100 volts.
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control at maximum and sensitivity switch at Distant (D).

ADJUSTMENTS FOR AUTOMATIC TUNING.
Any six stations in the "Standard Medium Wave" Broadcasting Band may be selected for "Automatic" tuning. The range of frequencies covered by each button from right to left,is as follows,and only stations with the given range can be obtained.

1. 850 .. 1500 K.C.
2. 850 .. 1500 K.C.
3. 700 .. 1300 K.C.
4. 700 .. 1300 K.C.
5. 550 .. 1100 K.C.
6. 550 .. 1100 K.C.

A sheet on which are printed the call-signs of all Australasian broadcasting stations accompanies the Receiver. Call-signs of the six stations selected should be removed from the sheet.

Remove the escutcheon plate beneath the dial, by removing the three screws,and take out the celluloid window.



Automatic Tuning Adjustments.

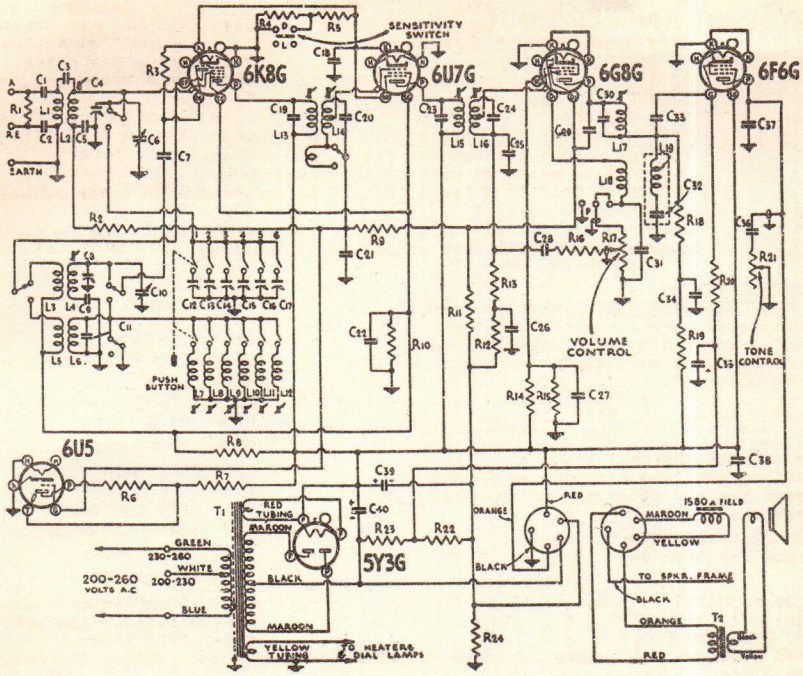
The stations should be adjusted in order of their frequency in kilocycles. This order is used in the following example: - 1. 2SM (1270 K.C.) 2. 2CH (1190 K.C.) 3. 2UW (1110 K.C.) 4. 2GB (870KC) 5. 2BL (740 K.C.) 6. 2FC (610 K.C.).
Place the six selected stations call-signs in their respective sections and replace the celluloid window and escutcheon plate.
TURN THE RECEIVER ON AND ALLOW IT TO OPERATE FOR AT LEAST FIVE MINUTES BEFORE MAKING ADJUSTMENTS.
Attached to the inside of the cabinet will be found an envelope containing a screwdriver and guide. On the rear of the chassis are six holes, number 1 to 6,as shown in the diagram. They give access to the adjusting screws. Take the screwdriver guide and insert it in the hole marked "1." Pass the screwdriver through the guide and turn till it is felt to engage in the slot of the adjusting screw. It will be found most convenient when making the adjustments to lean over the Receiver from the rear. In this attitude the adjustments may be carried out with one hand, and the controls operated with the other,and at the same time allowing a good view of the Tuning Indicator.
Then proceed as follows:- (1.)Set the Manual-Automatic control at "Manual" and tune the station selected for No. 1 push-button (2SM in the above example). (2.) Switch the Manual-Automatic control to "Automatic". It is advisable to set the Sensitivity switch to Distant (D) at the same time. (3) Press push-button No. 1.(4) Turn the screwdriver, previously placed in position, slowly, until station No.1 is heard (2SM in example). Watch the Tuning Indicator and adjust until its darkened sector is at the narrowest possible width. (5) While searching for the station, switch the Manual-Automatic control to "Manual" frequently to verify that station No.1 is that which is being tuned. (6) Switch the Manual-Automatic control to "Automatic". On top of the chassis are six more holes numbered 1 to 6 - see diag. These give access to six screw adjustment. Insert the screwdriver in the hole marked "1" and turn until the darkened sector of the Tuning Indicator is at its narrowest possible width. 7. Return to the rear of the chassis and make a final adjustment of adjusting screw No.1 until the Tuning Indicator shows most accurate tuning.
Now proceed in order of frequency to adjust for the other five stations making the set-up 2,3,4, 5, and 6, in sequence, by the same method as that described above for No. 1.

HOTPOINT-BANDMASTER A459ME

5-Valve, Medium Wave, Automatic and Manually Tuned A.C. Operated Superheterodyne

Tuning Range - 1500-550 K.C. R.F. Alignment Freq. - 600 K.C., 1400 K.C., 1500 K.C.
Intermediate Freq. - 460 K.C. Power Consumption 60 Watts. Loudspeaker Field Resistance 1580 ohm.
VALVE COMPLEMENT - 1. 6K8G Frequency Converter. 2. 6U7G I.F. Amp. 3. 6G8G I.F. Amp.,Det., A.V.C. & A.F. Amp. 4. 6F6G Output Pentode. 5. 5Y3G Rectifier. 6U5 Visual Tuning Indicator.

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 50,000 ohms 1/3 Watt
R4 - 2,000 ohms 1/3 Watt
R5 - 200 ohms 1/3W
R6 - 1meg. 1 Watt
R7 - 20,000 ohms 1W
R8 - 11,000 ohms 3W
R9 - 1¾ meg. 1/3W
R10- 20,000 ohms 1W
R11- 2.3 meg. 1/3W
R12- 300,000 ohms 1/3 Watt
R13- 2.3 meg.1/3W
R14- 1meg. 1 Watt
R15- 100,000 ohms 1 Watt
R16- 500,000 ohms 1/3 Watt
R17- 500,000 ohms Vol.Cont.
R18- 150,000 ohms 1 Watt
R19- 20,000 ohms 1 Watt
R20- 500,000 ohms 1/3 Watt
R21- 100,000 ohms Tone Cont.
R22- 20,000 ohms 1 Watt
R23- 100,000 ohms 1 Watt
R24- 20 ohms 3W
C1 - 500mmfd mica
C2 - 500mmfd mica
C3 - 4mmfd mica
C4 - 2-20mmfd air trimmer
C5 - .05mfd pap
C6 - Tuning Con.
C7 - 70mmfd mica (N)
C8 - 16-34mmfd air trimmer
C9 - 440mmfd mica (Padder)
C10- Tuning Cond.
C11- 100mmfd compensator
C12- 30-180mmfd mica trimmer
C13- 30-180mmfd mica trimmer
C14- 65-280mmfd mica trimmer
C15- 65-280mmfd mica trimmer
C16- 120-470mmfd mica trimmer
C17- 120-470mmfd mica trimmer
C18- .1mfd paper
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- .1mfd paper
C23- 115mmfd mica (A)
C24- 130mmfd mica (H)



C25- 110mmfd mica (L)
C26- .1mfd paper
C27- .1mfd paper
C28- .01mfd paper
C29- 50mmfd mica (D)
C30- 70mmfd mica (N)
C31- 110mmfd mica (L)
C32- 115mmfd mica (A)
C33- .02mfd paper
C34- .5mfd paper
C35- 25mfd 25V elect.
C36- .035mfd paper
C37- .0025mfd paper
C38- .1mfd paper
C39- 8mfd 500V elect.
C40- 8mfd 500V elect.

VALVE	BIAS VOLTS	SCREEN GRID TO CHASSIS VOLTS	PLATE TO CHASSIS VOLTS	PLATE CURRENT M.A.	HEATER VOLTS
6K8G Detector	-1.2‡2.8†	100	250	1.25	6.3
Oscillator	-	-	100	3.0	-
6U7G I.F. Amplifier	-1.2‡2.8†	100	250	1.0	6.3
6G8G Reflex Amplifier	-1.2	16*	165*	0.47	6.3
6F6G Pentode	-17.0	250	230	33.0	6.3
5Y3G Rectifier	720/360 volts, 65 m.a. total current .				5.0

Voltage across Loudspeaker field, 100 volts.
*Cannot be measured with ordinary voltmeter.
‡Control Grid to chassis. Cannot be measured with ordinary voltmeter.
†Cathode to chassis.
Measured at 240 volts A.C. supply. No signal input. Volume control at maximum and sensitivity switch at Distant (D).

NOTE: For Adjustments for Automatic Tuning - see Hotpoint Bandmaster A459DE.

HOTPOINT-BANDMASTER 459DB

5-Valve, Two Band, Battery Operated Superheterodyne

Tuning Ranges - (a) 1500-550 K.C. (b) 16-50M. R.F. Alignment Frequencies (a) 600 K.C., 1400 K.C. 1500 K.C. (b) 18M. Intermediate Freq.- 460 K.C.

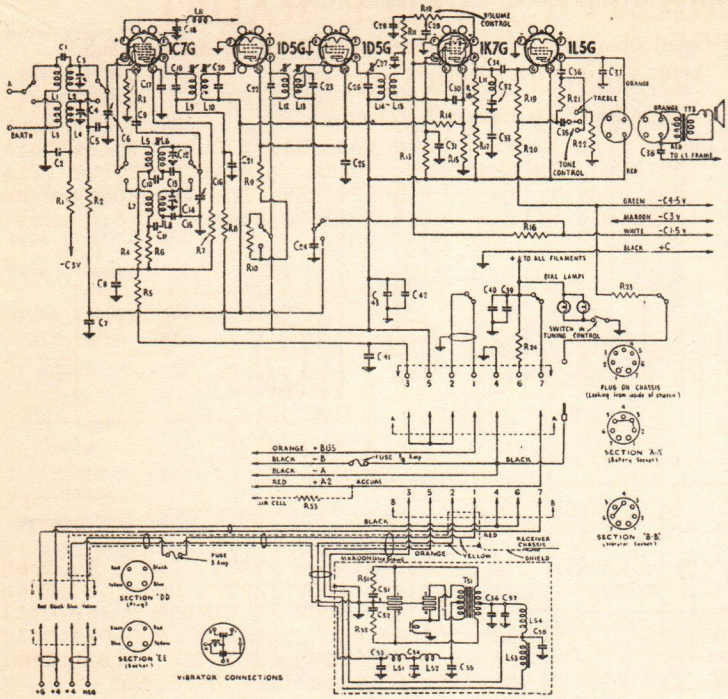
Current Consumption	"B" Battery Operation	Vibrator Operation
"A" Battery at 2 volts	0.60 amps.	
"A" Battery at 6 volts		1.2 amps.
"B" Battery at 135 volts	14-17 M.A.	(Supplied from vibrator Power Unit)

VALVE COMPLEMENT - 1. 1C7G Detector-Oscillator. 2. 1D5G I.F. Amplifier. 3. 1D5G I.F. Amp. 4. 1K7G Det.,A.V.C. & A.F. Amp. 5. 1L5G Output Pentode.
NOTE: The plate supply may be from dry "B" batteries or from a Vibrator Power Unit. Instructions for changing from one to the other will be found at the end of Model 449MB.

Vibrator Power Unit
R51- 50 ohms 1/3W
R52- 50 ohms 1/3W
C51- .02mfd paper
C52- .02mfd paper
C53- .1mfd paper
C54- .25mfd paper
C55- .25mfd paper
C56- 8mfd 450V elec
C57- .02mfd paper
C58- .5mfd paper

R1 - 100,000 ohms 1/3 Watt
R2 - 100,000 ohms 1/3 Watt
R3 - 50,000 ohms 1/3 Watt
R4 - 40,000 ohms 1 Watt
R5 - 5,000 ohms1W
R6 - 400 ohms 1/3W
R7 - 40,000 ohms 1 Watt
R8 - 300 ohms 1/3W
R9 - 100,000 ohms 1 Watt
R10- 150,000 ohms 1 Watt
R11- 100,000 ohms 1/3 Watt
R12- 500,000 ohms Vol.Control
R13- 1meg. 1 Watt
R14- 1.75meg.1/3W
R15- 2.3meg.1/3W
R16- 1.75meg.1/3W
R17- 50,000 ohms 1 Watt
R18- 200,000 ohms 1 Watt
R19- 390,000 ohms 1/3 Watt
R20- 100,000 ohms 1/3 Watt
R21- 200,000 ohms 1/3 Watt
R22- 15,000 ohms 1/3 Watt
R23- 600 ohms 1W
R24- 4.5 ohms w/w
C1 - 4mmfd mica
C2 - .05mfd paper
C3 - 2-20mmfd air trimmer
C4 - 2-20mmfd air trimmer
C5 - .05mfd paper
C6 - Tuning Cond.
C7 - .02mfd paper
C8 - 8mfd 450V elect.
C9 - 110mmfd mica (L)
C10- .05mfd paper
C11- .05mfd paper
C12- 16-34mmfd air trimmer
C13- 440mmfd mica (Padder)

HOTPOINT-BANDMASTER 459DB (Contd.)



C14- 2-10mmfd air trimmer
C15- 3500mmfd mica (Pad)
C16- Tuning Condenser
C17- .1mfd paper
C18- .1mfd "
C19- 115mmfd mica (A)
C20- 130mmfd mica (H)
C21- .05mfd paper
C22- 115mmfd mica (A)
C23- 130mmfd mica (H)
C24- .02mfd paper
C25- .1mfd paper
C26- 70mmfd mica (N)
C27- 110mmfd mica (L)
C28- 110mmfd mica (L)
C29- .01mfd paper
C30- 50mmfd mica (D)
C31- .1mfd paper
C32- 115mmfd mica (A)
C33- .5mfd paper
C34- .05mfd paper
C35- 2000 mmfd mica
C36- .05mfd paper
C37- .0025mfd paper
C38- .02mfd paper
C39- .5mfd paper
C40- 450mmfd mica
C41- 450mmfd mica
C42- 8mfd 450V electro.
C43- .1mfd paper

VALVE		Control Grid to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	FILAMENT VOLTS
1C7G Detector	M.W.	0	48	135	1.5	2.0
	S.W.	-3.0*	48	135	0.7	-
Oscillator	M.W.	-	-	60	1.5	-
	S.W.	-	-	100	3.0	-
1D5G I.F. Amplifier		0	30	135	0.75	2.0
1D5G I.F. Amplifier	M.W.	-1.5*	30	135	0.36	2.0
	S.W.	0	30	135	0.75	-
1K7G Reflex Amplifier		-1.5*	55*	75*	0.22	2.0
1L5G Pentode		-4.5*	135	130	7.0	2.0

*Cannot be measured with ordinary voltmeter.
Measured with no signal input and Volume Control at maximum clockwise.

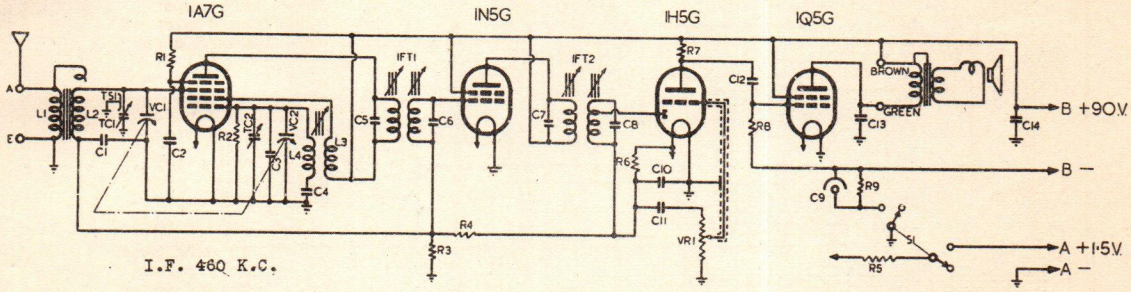
HIS MASTER'S VOICE RADIO

Manufactured by The Gramophone Co., Ltd., 2 Parramatta Road, Homebush, N.S.W.

HIS MASTER'S VOICE 41

4-Valve Broadcast Battery Receiver

BATTERIES. 1-1.5 volt Dry Cell, Type X-250. 2-45 volt Heavy Duty "B" Batteries. CONSUMPTION. "A" Battery, 0.25 amp. "B" Battery, 10 ma. SPEECH OUTPUT (Plate Circuit) Approx. 270 milliwatts undistorted. LOUDSPEAKER. The loudspeaker used is a 6-inch permanent magnet dynamic with a voice coil impedance of 3.5 ohms at 400 cycles.



R1. 75,000 ohms ¼W
R2. 200,000 ohms ¼W
R3. 2meg. ¼ Watt
R4. 2meg. ¼ Watt
R5. 0.2 ohms W/W
R6. 500,000 ohms ¼W
R7. 1meg. ¼ Watt
R8. 1meg. ¼ Watt
R9. 600 ohms ¼ Watt

C1. 0.05mfd 200V
C2. 0.05mfd 200V
C3. 15mmfd
C4. 400mmfd
C5. 100mmfd
C6. 50mmfd
C7. 100mmfd
C8. 100mmfd
C9. 5mfd 25V elec. cond.

C10. 500mmfd
C11. 0.01mfd 600V
C12. 0.01mfd 600V
C13. 1000mmfd
C14. 0.5mfd 200V
VC1&VC2. 380mmfd 2 Gang Cond.
VR1. 1meg. pot.
S1. Battery Swtch. 6" permag.spkr.

1FT1. 1st I.F. Trans.
1FT2. 2nd I.F. Trans.
L1&L2. B/C Aer.Coil
L3&L4. B/C Osc.Coil
TC1&TC2. Air trimm. 1.5-18mmfd
TS1. Fixed trimmer shunt 7mmfd

VOLTAGE AND CURRENT TABLE

	1A7G	1N5G	1H5G	1Q5G
Plate to Chassis Volts	83	83	*40	81
Screen to Chassis Volts	*40	84	-	84
Oscillator Plate to Chassis volts	83	-	-	-
Filament Volts	1.4	1.4	1.4	1.4
Plate Current in ma.	0.8	1.3	-	5.5
Oscillator Plate Current in ma.	0.8	-	-	-
Screen Current in ma.	0.6	0.3	-	0.7

*Measured on 1,000-volt range.

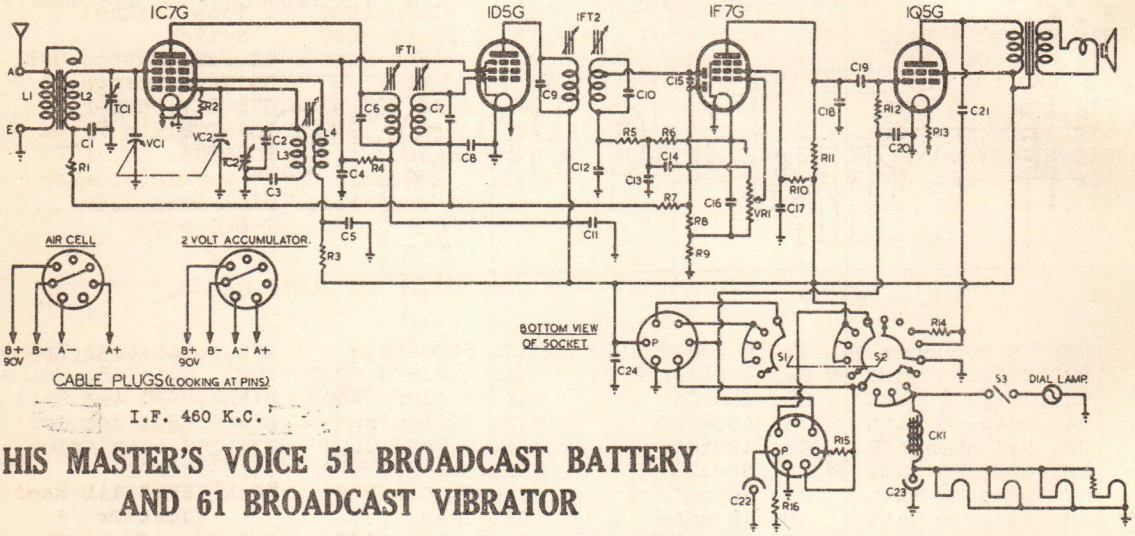
HIS MASTER'S VOICE 51, 61, 52 AND 62

BATTERIES. Model 51 - "A" Supply - Air-Cell or 2 volt 110 amp.hr.Accumulator. "B" Supply - 2 x 45 volt Heavy Duty Batteries. Model 52 - "A" Supply - Air-Cell or 2 volt 110 amp.hr.Accumulator. "B" Supply - 2 x 45 volt Superdyne Batteries. Model 61 - "A" Supply - 2 volt 190 amp.hr.Accumulator. "B" Supply - Vibrator. Model 62 - "A" Supply 2 volt 190 amp.hr.Accumulator. "B" Supply - Vibrator. CONSUMPTION - Model 51 and 52 - "A" Supply 0.34 amp. "B" Supply - 12 ma. Model 61 and 62 - "A" Supply - 1.7 amp. SPEECH OUTPUT - 270 milliwatts undistorted (plate circuit). WAVE-LENGTH RANGE - Models 51 & 61 - 200-545 metres (1500-550 kc.). Models 52 & 62: 200-545 metres (1500-550 kc). 16.5-49 metres (18.17-6. 12 mc.).
VALVES: 1C7G Converter. 1D5G I.F. 1F7G Demod. A.V.C. and 1st A.F. 1Q5G Power.
LOUDSPEAKER - The speaker used is of the permanent magnet dynamic type. It is a 6" model with a voice coil impedance at 400 cycles of 3.5 ohms.
CAUTION. It is not advisable to alter the length of any of the battery connection cables, because their resistance forms part of the total series resistance introduced to obtain correct filament voltages.

TONE MONITOR (Combined with Battery Switch). The tone is controlled by a four-

position two-deck switch, the first position on which switches the receiver off; the second position switches the receiver on and gives normal reproduction, while the third and fourth positions introduce an increasing degree of high-frequency cut by means of a condenser resistor combination shunted across the speaker transformer primary.

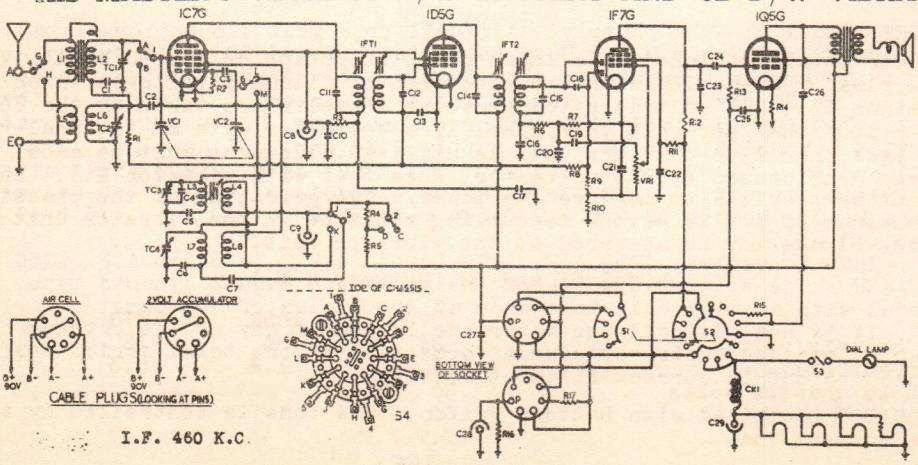
IMPORTANT NOTE. - It is essential that the resistance of the 5-amp.fuse in the vibrator positive L.T. circuit should not exceed 0.01 of an ohm, otherwise the performance and battery life will suffer. Use only Australux 5-amp.fuse, type 1AG.



HIS MASTER'S VOICE 51 BROADCAST BATTERY AND 61 BROADCAST VIBRATOR

R1. 100,000 ohms ½W
R2. 50,000 ohms ½W
R3. 12,500 ohms ½W
R4. 25,000 ohms ½W
R5. 50,000 ohms ½W
R6. 500,000 ohms ½W
R7. 2meg. ¼ Watt
R8. 2meg. ¼ Watt
R9. 2meg. ¼ Watt
R10. 600,000 ohms ½W
R11. 250,000 ohms ½W
R12. 1meg. ¼ Watt
R13. 4.87 ohms W/W
R14. 10,000 ohms ½W
R15. 0.83 ohms W/W
R16. 550 ohms 3 Watt
C1. 0.05mfd 200V
C2. 15mmfd
C3. 400mmfd
C4. 0.1mfd 200V
C5. 0.1mfd 200V
C6. 100mmfd
C7. 50mmfd
C8. 0.02mfd 300V
C9. 100mmfd
C10. 100mmfd
C11. 0.5mfd 200V
C12. 100mmfd
C13. 100mmfd
C14. 0.01mfd 600V
C15. 50mmfd
C16. 0.5mfd 200V
C17. 0.1mfd 200V
C18. 250mmfd
C19. 0.01mfd 600V
C20. 0.25mfd 200V
C21. 0.02mfd 600V
C22. 10mfd 25V elec.
C23. 1000mfd 12PV "
C24. 100mmfd
VC1&VC2. 380mmfd 2 gang condenser
VR1. 1meg. pot.
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F. Trans.
L1&L2. B/C Aer.Coil
L3&L4. B/C Osc.Coil
S1&S2. Battery & Tone Control Swt.
S3. Push Button Switch
CK1. LT Choke
TC1&TC2. Air trim.
6" permag.Spkr.
Dial lamp 2.5V 0.3 amp.

HIS MASTER'S VOICE 52 D/W BATTERY AND 62 D/W VIBRATOR



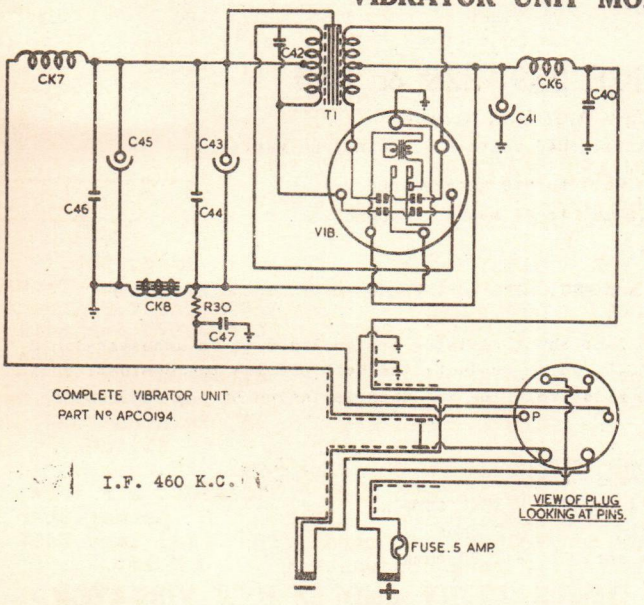
HIS MASTER'S VOICE 52 AND 62 (Contd.)

R1. 100,000 ohms ½W
R2. 50,000 ohms ½W
R3. 25,000 ohms ½W
R4. 5,000 ohms ½W
R5. 7,500 ohms ½W
R6. 50,000 ohms ½W
R7. 500,000 ohms ½W
R8. 2meg. ½ Watt
R9. 2 meg. ½ Watt
R10.2 meg. ½ Watt
R11.600,000 ohms ½W
R12.250,000 ohms ½W
R13.1 meg. ½ Watt
R14. 4.87 ohms W/W
R15. 10,000 ohms ½W
R16.550 ohms 3 Watt
R17.0.83 ohms W/W

C1. 0.05mfd 200V
C2. Neut.Condenser
C3. 50mmfd
C4. 15mmfd
C5. 400mmfd
C6. 3250mmfd
C7. 0.01mfd 600V
C8. 8mfd 250V elect.with C9
C9. 16mfd 250V elect.with C8
C10.0.1mfd 200V
C11.100mmfd
C12.50mmfd
C13.0.02mfd 300V
C14.100mmfd
C15.100mmfd
C16. 100mmfd
C17. 0.5mfd 200V
C18. 50mmfd
C19. 0.01mfd 600V
C20. 100mmfd
C21. 0.5mfd 200V
C22. 0.1mfd 200V
C23. 250mmfd
C24. 0.01mfd 600V
C25. 0.25mfd 200V
C26. 0.02mfd 600V
C27. 100mmfd
C28. 10mfd 25V elec.
C29. 1000mfd 12PV elec.
VC1&VC2. 380mmfd 2 Gang condenser

VR1. 1 meg. pot.
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F.Trans.
L1&L2.B/C Aer.Coil
L3&L4.B/C Osc.Coil
L5&L6.S/W Aer.Coil
L7&L8.S/W Osc.Coil
S1&S2.Battery & Tone Control Switch
S3.Push Button Swt.
S4.Wave Change "
CK1.L.T.Choke
TC1&TC2.Air Trimm.
TC3&TC4. " "
6" permag.speaker
Dial lamp 2.5V 0.3 amp.

VIBRATOR UNIT MODELS 61 AND 62



T1. vibrator transformer
CK6. R.F. Choke L.T.
CK7. R.F. Choke H.T.
CK8. HT Choke
V1B "Oak" 2V.Split Reed Vibrator
C40. 0.1mfd 200V Cond.
C41. 400mfd 12PV Electro.
C42. 0.01mfd 1000V Cond.
C43. 8mfd 525 P.V. Elect.
C44. 0.1mfd 400V Condenser
C45. 24mfd 150P.V.elect.
C46. 0.5mfd 200V Condenser
C47. 0.1mfd 200V Condenser
R30. 250,000 ohms ½ Watt
Vibrator Plug & Lead

VOLTAGE TABLE.

The receiver should be tuned to a point of no reception on the BC band. Values given are plus or minus 10% with the exception of filament voltages which are plus or minus 5%. All voltage readings above 10 volts are taken on the 250volt scale of a 1000 ohms per volt voltmeter. If a voltmeter with an internal resistance of less than 1000 ohms per volt is utilised,allowance must be made for the voltage drop caused by the voltmeter. Note that,with vibrator H.T. supply, it will not be possible to measure the power valve grid bias at the chassis due to the presence of a 0.25 megohm decoupling resistor in the vibrator unit; however, this voltage may be measured at the vibrator unit.

Model 51 and 52 (Battery H.T.).

	1C7G	1D5G	1F7G	1Q5G
Plate to chassis volts	84	84	15	82
Plate current (ma)	1.2	1.4	0.3	4.5
Osc.plate to chassis volts	BC SW 60 69	-	-	-
Osc.Plate current (ma)	1.7 1.7	-	-	-

VOLTAGE TABLE MODELS 51 AND 52 (Contd.)

	1C7G	1D5G	1F7G	1Q5G
Screen to chassis volts	37	37	19	84
Screen current (ma)	1.0	0.6	0.1	0.7
Bias voltages	0	0	0	-6.3
With air cell = 2.33 volts or Accumulator = 2.0 volts	1.85	1.85	1.85	1.37

MODELS 61 AND 62 (VIBRATOR H.T.)

	1C7G	1D5G	1F7G	1Q5G
Plate to chassis volts	86	86	15	84
Plate current (ma)	1.3	1.6	0.3	5.9
	BC SW			
Osc. plate to chassis volts	61 70	-	-	-
Screen to chassis volts	40	40	19	86
Screen current (ma)	1.0	0.7	0.1	0.9
Bias voltages	0	0	0	-5.8
Filament voltages				
Accumulator = 2.0 volts	1.85	1.85	1.85	1.37
Osc. Plate current (ma)	1.7 1.7			

HIS MASTER'S VOICE 259, 229 & 250

5-Valve Dual Wave A.C./D.C. Receivers

CONSUMPTION - 240 volts A.C. mains: 103 watts. 240 volts D.C. mains: 86 watts.

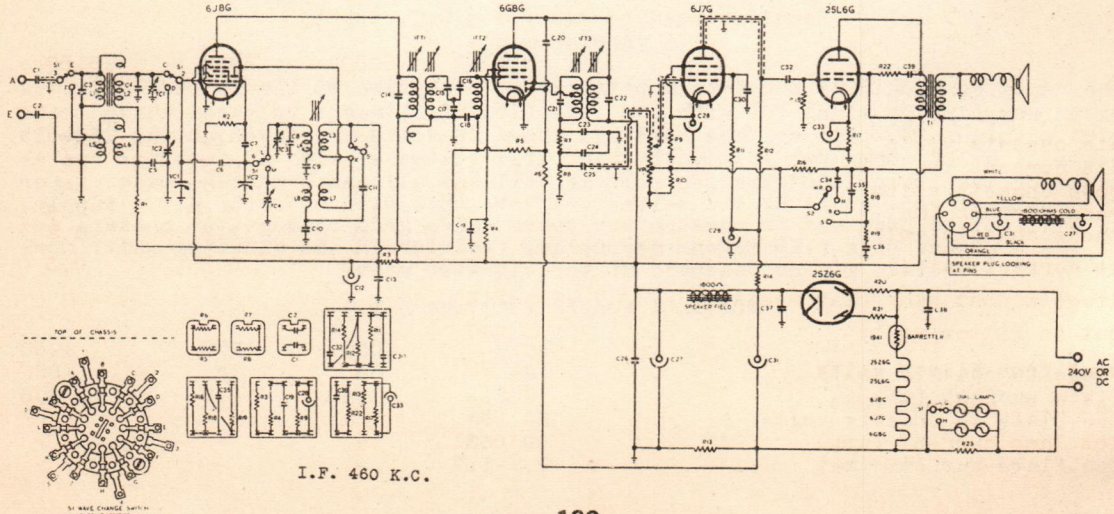
WAVE-LENGTH RANGE - B.C.: 200 metres (1500 kc.) to 545 metres (550 kc).
S.W.: 13.9 metres (21.57mc) to 47 metres (6.38mc).

MAX. UNDISTORTED POWER OUTPUT - 1.75 watts.

VALVES - 6J8G Converter. 6G8G I.F. Demod. and AVC. 6J7G A.F. 25L6G Power. 25Z6G Rectifier. 1941 Barretter.

VENTILATING COWL. The barretter and pilot lamp shunt resistor are enclosed in an asbestor-lined metal ventilating cowl INSULATED FROM CHASSIS, which conducts the heat outside the cabinet; thus the temperature inside the cabinet is kept relatively low and deterioriation of the cabinet finish is avoided.

LOUDSPEAKER: Model 229: 8-inch electrodynamic cone.
Model 259: 10-inch electrodynamic cone.
D.C. resistance of field coil (cold) - 1800 ohms.
D.C. resistance of voice coil - 2 ohms
400 cycle impedance of voice coil - 2.35 ohms



HIS MASTER'S VOICE 259, 229 & 250 (Contd.)

R1. 100,000 ohms ¼W
R2. 50,000 ohms ¼W
R3. 2000 ohms ¼W
R4. 5000 ohms ¼W
R5. 1meg. ¼ Watt
R6. 1 meg. ¼ Watt
R7. 50,000 ohms ¼W
R8. 250,000 ohms "
R9. 4000 ohms ¼W
R10.3000 ohms ¼W
R11.1.5meg. ¼ Watt
R12.250,000 ohms ¼W
R13.40 ohms 3 Watt
R14.100000 ohms ¼W
R15.500,000 ohms ¼W
R16.10,000 ohms ¼W
R17.150 ohms 3Watt
R18. 3000 ohms ¼W
R19.300 ohms ¼Watt
R20.100 ohms 3 "
R21.100 ohms 3 "
R22.300 ohms ¼Watt
R23.90 ohms 20W
C1. 0.002mfd
C2. 0.005mfd
C3. 50mmfd
C4. 15mmfd
C5. 0.05mfd 200V
C6. 0.3mmfd Neut. condenser
C7. 50mmfd
C8. 20mmfd
C9. 460mmfd
C10.5400mmfd
C11.0.01mfd 600V
C12.24mfd 300V WKG elec.con. with C29
C13.0.05mfd 400V
C14.100mmfd
C15.50mmfd
C16.50mmfd
C17.0.005mfd
C18.0.05mfd 200V
C19.0.1mfd 400V
C20.50mmfd
C21.100mmfd
C22.100mmfd
C23.100mmfd
C24.100mmfd
C25.0.1mfd 400V
C26.0.5mfd 400V
C27.30mfd 300V WKG elec.cond.
C28.10mfd 25V elec.cond.
C29.8mfd 300V WKG elec.con.with C12
C30.0.25mfd 400V
C31.20mfd 450V WKG elec.cond.
C32.0.02mfd 600V
C33.10mfd 25V elec.cond.
C34.0.01mfd 600V
C35.0.02mfd 400V
C36.1mfd 200V
C37.0.02mfd 600V
C38.0.02mfd 600V
C39.0.04mfd 400V
VC1&VC2. 417mmfd 2 gang condenser
VR1. 1meg. pot.
dial lamps 3.2V 0.35 amp.
S2. Tone Monitor Swtch.
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F.Trans.
1FT3. 3rd I.F.Trans.
10" spkr.& elec.Mod.259
8" spkr. & elec.Mod.229
T1. Output Transformer
L1&L2. B/C Aerial Coil
L3&L4. B/C Oscillator Coil
L5&L6. S/W Aerial Coil
L7&L8. S/W Oscillator Coil

VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to point of no reception broadcast band,with line voltage of 240 volts. If a voltmeter having a resistance of less than 1000 ohms per volt is used, allowance must be made for the voltage drop caused by the voltmeter.

Receiver used on 240 volts A.C. supply

	6J8G Osc.	6J8G Amp.	6G8G	6J7G	25L6G
Plate chassis volts	98	114	114	52	101
Plate current (ma)	4.2	1.5	7.0	0.4	48
Screen-chassis volts		97	100	22	114
Screen current (ma)		2.8	2.0	0.1	2.8
Cathode-chassis volts		0	0	1.5	7.3
Heater current (AC amps)		0.3	0.3	0.3	0.3
Voltage across back-bias resistor		2.8			
Input to filter volts		260			
Output from filter volts		114			
Total H.T. current (ma)		70			

Receiver used on 240 volts D.C. supply

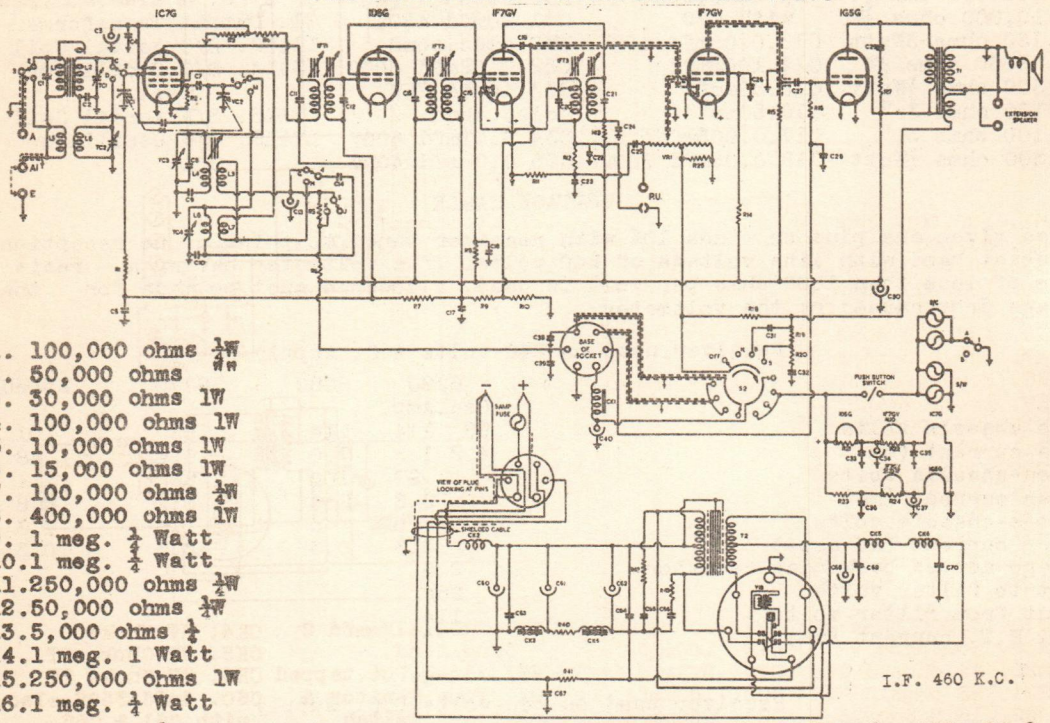
	6J8G Osc.	6J8G Amp.	6G8G	6J7G	25L6G
Plate chassis volts	85	98	98	44	87
Plate current (ma)	3.5	1.3	5.8	0.34	42
Screen chassis volts		85	88	17	98
Screen current (ma)		2.4	1.7	0.08	2.5
Cathode chassis volts		0	0	1.3	6.2
Heat current (amps)		0.3	0.3	0.3	0.3
Voltage across back bias resistor		2.4			
Input to filter volts		217			
Output from filter volts		98			
Total H.F. current (ma)		57			
Pilot lamp current (amp)		0.31			

HIS MASTER'S VOICE 329 AND 359

5-Valve Vibrator Powered Battery Receivers

BATTERY - The battery required for the operation of this receiver is as follows: One 6-volt 150-amp. hour accumulator. CONSUMPTION - The battery consumption of this model is approx. 1.0 amp. in normal operation. SPEECH OUTPUT - Approx. 0.75 watts undistorted. WAVE-LENGTH RANGE - 187.5-545 metres (1600-550 kc). *13.9-47 metres (21.57-6.38mc). *Model 329 only.
VALVES: 1C7G Converter. 1D5G 1st I.F. 1F7G 2nd I.F. and Demod. 1F7G 1st A.F. & AVC. 1G5G Power. LOUDSPEAKER - Permanent magnetic. 10" model with voice coil impedance at 400 cycles of 3.3 ohms.
TONE MONITOR. This is a four-position, single-deck switch,used as a combined tone control and battery switch. 1st position - Receiver switched off. 2nd position - (Normal)- Receiver on, maximum treble and bass note reproduction. 3rd position (Bass) - Receiver on, high audio-freq. cut introduced. 4th position (Speech) - Receiver on, low audio-frequency cut introduced.

HIS MASTER'S VOICE 329 Dual Wave



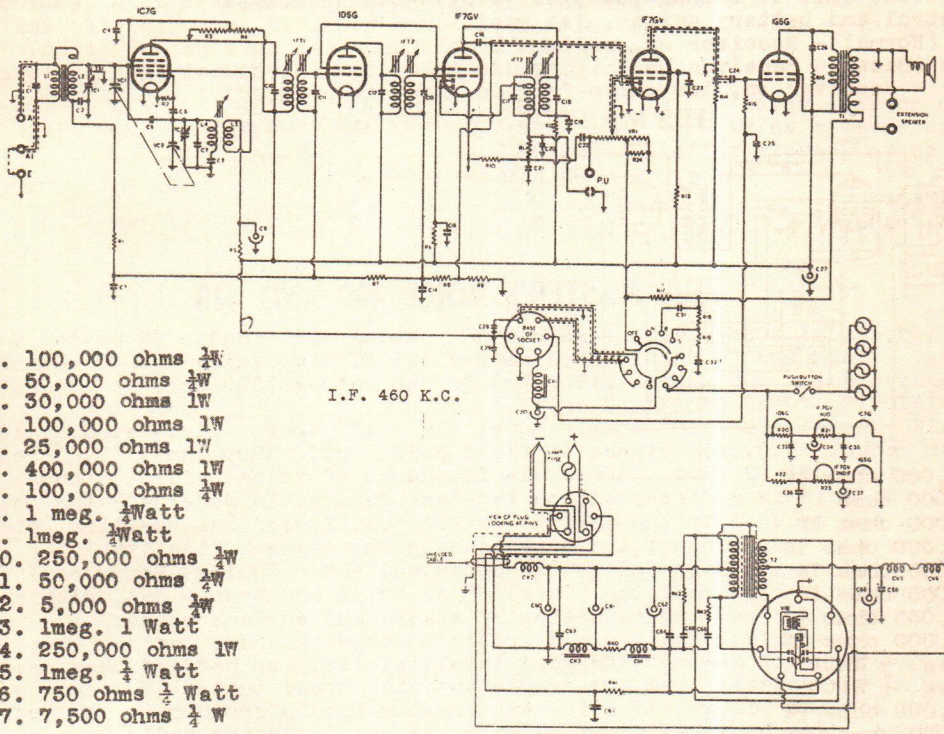
R1. 100,000 ohms ¼W
R2. 50,000 ohms
R3. 30,000 ohms 1W
R4. 100,000 ohms 1W
R5. 10,000 ohms 1W
R6. 15,000 ohms 1W
R7. 100,000 ohms ¼W
R8. 400,000 ohms 1W
R9. 1 meg. ¼ Watt
R10.1 meg. ¼ Watt
R11.250,000 ohms ¼W
R12.50,000 ohms ¼W
R13.5,000 ohms ¼
R14.1 meg. 1 Watt
R15.250,000 ohms 1W
R16.1 meg. ¼ Watt
R17.750 ohms ¼ Watt
R18.7,500 ohms ¼W
R19.1,000 ohms ¼W
R20.300 ohms ¼ Watt
R21.33 ohms 3 Watt
R22.33 ohms 3 Watt
R23.16.5 ohms 3W
R24.33 ohms 3 Watt
R25.3000 ohms ¼W
C1. 100mmfd
C2. 0.05mfd 200V
C3. 4mfd 100V WKG Elec. Cond.
C4. 0.1mfd 200V
C5. 0.02mfd 300V
C6. Neut.Con. 1mmf
C7. 50mmfd
C8. 15mmfd
C9. 437mmfd
C10.5400mmfd
C11.100mmfd
C12.50mmfd
C13.16mfd 250V WKG elec.with C30.
C14.0.01mfd 600V
C15.100mmfd
C16.50mmfd
C17.0.02mfd 300V
C18.0.1mfd 200V
C19.50mmfd
C20.100mmfd
C21.100mmfd
C22.100mmfd
C23.250mmfd
C24.0.1mfd 200V
C25.0.01mfd 600V
C26.0.1mfd 200V
C27. 0.01mfd 600V
C28. 1.0mfd 200V
C29. 0.01mfd 600V
C30. 8mfd 250V WKG elec. with C13
C31. 0.02mfd 300V
C32. 1.0mfd 200V
C33. 0.1mfd 200V
C34. 500mfd 12PV elec. with C40
C35. 0.1mfd 200V
C36. 0.1mfd 200V
C37. 10mfd 25V WKG elec.Cond.
C38. 0.5mfd 200V
C39. 0.5mfd 200V
C40. 500mfd 12PV elec. with C34
VR1. 1 meg.Pot.tap.
VC1&VC2. 417mmfd 2 gang condenser
S2. Tone Mon.& bat.Swt.
dial lamps 6.3V 0.15 to 0.3 amp.
1FT1.1st I.F.Trans.
1FT2.2nd I.F.Trans.
1FT3.3rd I.F.Trans.
T1. Output Trans.
CK1. LT Choke
10" DIA Permag Spkr.
L1&L2.B/C Aer.Coil
L3&L4.B/C Osc.Coil
L5&L6.S/W Aer.Coil
L7&L8.S/W Osc.Coil
TC1&TC2. Air trimm. 1.5-18mmfd
TC3&TC4. Air trimm. 1.5-18mmfd

HIS MASTER'S VOICE 329 (Contd.)

T2. Vibrator Trans.
VIB "Oak" Split Reed
Synchronous Vibrator
CK2. R.F.Choke HT
CK3. HT Choke
CK4. HT Choke
CK5. RF Choke L.T.

CK6. RF Choke L.T. elec.with C61&C62
C60. 4mfd 350V elec.with C61&C62
C61. 4mfd 350V elec.with C60&C62
C62. 4mfd 525V elec.with C60&C61
C63.0.5mfd 400V Con.
C64.0.1mfd 400V Con.
C65.0.02mfd 1600V "
C66.0.02mfd 1500V "
C67.0.1mfd 200V "
C68.500mfd 6V WKG elect. cond.
C69.0.5mfd 200V Con.
C70.0.1mfd 200V "
R40.200 ohms 3W Res.
R41.250,000 ohms ¼W
R42.1000 ohm ¼W
R43.1000 ohm ¼W

HIS MASTER'S VOICE 359—Broadcast



R1. 100,000 ohms ¼W
R2. 50,000 ohms ¼W
R3. 30,000 ohms 1W
R4. 100,000 ohms 1W
R5. 25,000 ohms 1W
R6. 400,000 ohms 1W
R7. 100,000 ohms ¼W
R8. 1 meg. ¼Watt
R9. 1meg. ¼Watt
R10. 250,000 ohms ¼W
R11. 50,000 ohms ¼W
R12. 5,000 ohms ¼W
R13. 1meg. 1 Watt
R14. 250,000 ohms 1W
R15. 1meg. ½ Watt
R16. 750 ohms ½ Watt
R17. 7,500 ohms ¼ W
R18. 1,000 ohms ¼W
R19. 300 ohms ¼W
R20. 33 ohms 3 Watt
R21. 33 ohms 3 Watt
R22. 16.5 ohms 3 W
R23. 33 ohms 3 Watt
R24. 3,000 ohms ¼W
C1. 100mmfd
C2. 0.05mfd 200V
C3. 0.02mfd 300V
C4. 0.1mfd 200V
C5. 50mmfd
C6. Neut.Cond. 1mmfd
C7. 20mmfd
C8. 437mmfd
C9. 16mfd 25V WKG Elec. with C27
C10.100mmfd
C11. 50mmfd
C12. 100mmfd
C13. 100mmfd
C14. 0.02mfd 300V
C15. 0.1mfd 200V
C16. 50mmfd
C17. 100mmfd
C18. 100mmfd
C19. 0.1mfd 200V
C20. 100mmfd
C21. 250mmfd
C22. 0.01mfd 600V
C23. 0.1mfd 200V
C24. 0.01mfd 600V
C25. 1mfd 200V
C26. 0.01mfd 600V
C27. 8mfd 250V WKG elec.with C9
C28. 0.5mfd 200V
C29. 0.5mfd 200V
C30. 500mfd 12PV elec.with C34
C31. 0.02mfd 300V
C32. 1mfd 200V
C33. 0.1mfd 200V
C34. 500mfd 12PV elec. with C30
C35. 0.1mfd 200V
C36. 0.1mfd 200V
C37. 10mfd 25V WKG elec.Cond.
VC1&VC2. 417mmfd 2 Gang Cond.
VR1. 1meg.Pot.tapped
S1. Tone Monitor & Battery Switch
Dial lamps 6.3V 0.15 to 0.3 amp.
IFT1. 1st I.F.Trans.
IFT2 2nd I.F.Trans.
IFT3. 3rd I.F.Trans.
T1. Output Trans.
CK1. LT Choke
10" dia.Permag.Spkr.
L1&L2. B/C Aer.Coil
L3&L4. B/c Osc.Coil
TS1. Fixed Trimm. shunt 7.0mmfd
TC1&TC2.Air trimm. 15-18mmfd
T2. Vibrator Trans.
V18. "Oak" split reed synchronous Vib.
CK2. RF Choke HT
CK3. HT Choke
CK4. HT Choke
CK5. RF Choke LT
CK6. RF Choke LT
C60. 4mfd 350V elec. with C61 & C62
C61. 4mfd 350V elec. with C60 & C62
C63. 0.5mfd 400V
C64. 0.1mfd 400V
C65. 0.02mfd 1,500V
C66. .02mfd 1500V
C67. 0.1mfd 200V
C68. 500mfd 6V WKG elec. condenser
C69. 0.5mfd 200V
C70. 0.1mfd 200V
R40. 200 ohms 3Watt
R41. 250000 ohms ¼W
R42. 1,000 ohm ¼W
R43. 1,000 ohm ¼W

VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to a point of no reception and a low tension battery voltage of 6 volts. Bias voltages measured between the negative side of filament and chassis. Note that the 1G5G valve (V5) bias of 14 volts is obtained from the voltage drop across the two smoothing chokes and 200 ohm resistor connected in series in the negative side of the high-tension circuit. Since this bias voltage is decoupled by means of a ¼ meg. resistor in the vibrator chassis it is not possible to measure it at the receiver, but only at the vibrator unit. If a voltmeter with an internal resistance of less than 1000 ohms per volt is utilised, allowance must be made for the voltage drop caused by the voltmeter.

	V1 1C7G	V2 1D5G	V3 1F7GV	V4 1F7GV	V5 1G5G
Plate to chassis volts	140	140	138	42	136
Screen to chassis volts	28	42	42	30	140
Osc. plate to chassis volts	BC 95 SW 110	-	-	-	-
Bias voltage	0	4	2	2	14
Filament voltages	2	2	2	2	2

HIS MASTER'S VOICE 409 AND 429

CONSUMPTION. Model 409 - Radio - 96 watts. Model 429 - Radio 96 watts. Gram.- 170 watts. WAVE LENGTH RANGE. 13.9 metres (21.57 megacycles) to 47 metres (6.38 megacycles). 187 metres (1600 kc) to 545 metres (550 kc).
MAX. UNDISTORTED POWER OUTPUT. 7 watts.
LOUDSPEAKER. Model 409 - 10" spkr. Model 429 - 12" spkr. Field winding acting as filter choke. D.C. resistance of field coil, cold 1200 ohms. D.C. resistance of voice coil 2 ohms. 400 cycle impedance of voice coil 2.35 ohms.
TONE MONITOR. This is a five-position two-deck switch. In Model 409 the following effects are secured in the various switch positions: 1st position (Wide Range); Bass and treble boost, and broad tuning, for highest fidelity.
2nd position (Normal): Bass and treble boost, and sharp tuning. For normal and distant reception. 3rd position (Bass): Bass boost and treble cut, with sharp tuning. For deeper tone, and reduction of static and surface noise.
4th position. (Speech): Bass cut and treble boost, with sharp tuning. For long-distance reception of speech with good intelligibility, or reduced bass response.
5th position (Overseas): Bass and treble cut, with broad tuning. For easy s/wave tuning with reduced background noise and freedom from microphony. In Model 429, additional bass boost is provided, which is cut in by the Radio-Gram, switch in the "Gram". position, and removed in the "Radio" position.
STATIC LIMITER. This device is controlled by a switch located on the right-hand side of the cabinet, in the case of Model 409, and on the control panel in Model 429. It is intended to limit the peak level of static or electrical disturbances of peaky wave-form to a value not greatly exceeding the level of the carrier of the station being received, thus preventing the drowning of the signal by very loud bursts of static. It is useful chiefly in long-distance reception of speech, and in s/w reception where electrical interference is severe. It usually has a slightly detrimental effect on the tone of musical reception, and should therefore be switched off when not required. It has no effect on the sensitivity or selectivity of the receiver.

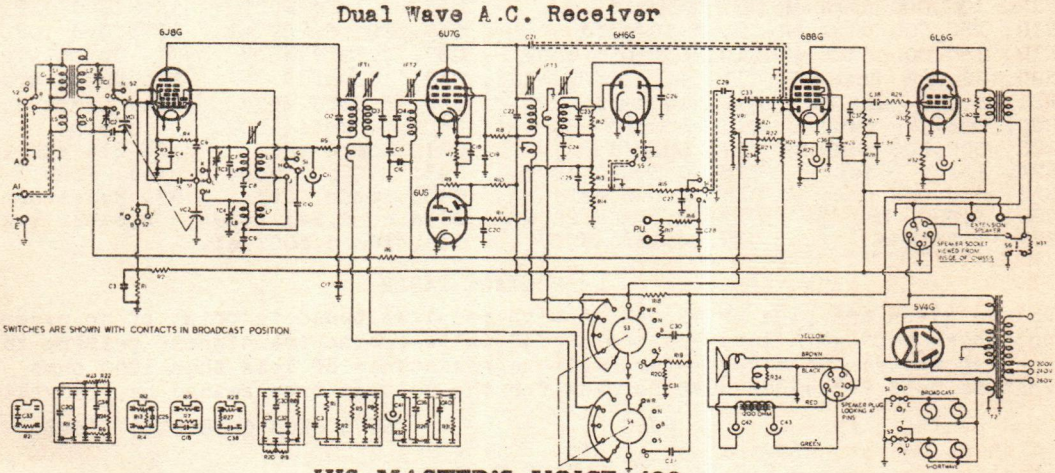
Model 409

R1. 50,000 ohms 1W	R11. 2meg. ¼Watt	R21. 2meg. ¼Watt	R31. 500 ohms 1W
R2. 30,000 ohms 2W	R12. 1meg. ¼Watt	R22. 500,000 ohms ½W	R32. 170 ohms 3W
R3. 300 ohms ½W	R13. 50,000 ohms ½W	R23. 500,000 ohms ½W	R33. 33 ohms W/W
R4. 50,000 ohms ½W	R14. 150,000 ohms ½W	R24. 1meg. ¼ Watt	R34. 0.25 ohms
R5. 25,000 ohms 1W	R15. 50,000 ohms ¼W	R25. 5,000 ohms ½W	C1. 50mmfd cond.
R6. 100,000 ohms ½W	R16. 1.5meg. ¼W	R26. 3meg. 1 Watt	C2. 0.05mfd 200V
R7. 300 ohms ½ Watt	R17. 100,000 ohms ½W	R27. 500,000 ohms 1W	C3. 0.1mfd 400V
R8. 75,000 ohms 1W	R18. 150,000 ohms ½W	R28. 50,000 ohms 1W	C4. 0.1mfd 200V
R9. 500,000 ohms 1W	R19. 20,000 ohms ½W	R29. 50,000 ohms ½W	C5. 0.75mmfd neut. condenser
R10. 10,000 ohms 1W	R20. 3,000 ohms ¼W	R30. 500,000 ohms ½W	

HIS MASTER'S VOICE 409 (Contd.)

C6. 25mmfd
C7. 15mmfd
C8. 437mmfd
C9. 5,400mmfd
C10. 0.01mfd 600V
C11. 4mfd 350V elec. condenser
C12. 100mmfd
C13. 50mmfd
C14. 50mmfd
C15. 0.004mfd
C16. 0.05mfd 200V
C17. 0.5mfd 400V
C18. 0.1mfd 200V
C19. 0.02mfd 400V
C20. 0.02mfd 400V
C21. 50mmfd
C22. 100mmfd
C23. 100mmfd
C24. 50mmfd
C25. 0.0005mfd
C26. 0.5mfd 200V
C27. 250mmfd
C28. 100mmfd
C29. 0.02mfd 400V
C30. 0.0015mfd
C31. 0.1mfd 200V
C32. 0.02mfd 400V
C33. 0.1mfd 400V
C34. 0.1mfd 200V
C35. 10mfd 25V elec. cond.
C36. 0.1mfd 400V
C37. 100mmfd
C38. 0.02mfd 600V
C39. 0.5mfd 400V
C40. 0.02mfd 600V
C41. 25mfd 25V elec. condenser
C42. 16mfd 350V elec. cond. Reg. type.
C43. 16mfd 550V elec. condenser
VC1&VC2. 417mmfd 2 gang cond.
VR1. 1meg.Pot. tapped 25,000
S1&S2. Wave change switch
S3&S4.Tone Mon.Swtch.
55. Static Limit.Swtch.
56. Receiver Spkr. "
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F.Trans.
1FT3. 3rd I.F.Trans.
L1&L2.B/C aer. coil
L3&L4. B/c osc.coil
L5&L6. S/W aer. coil
L7&L8. S/W osc.coil
T1. Output Trans.
T2. Mains trans.
10" spkr. & elec. Model 409
dial lamps 6.2V 0.3 amp.
TC1&TC2. air cond.
TC3&TC4. air cond.

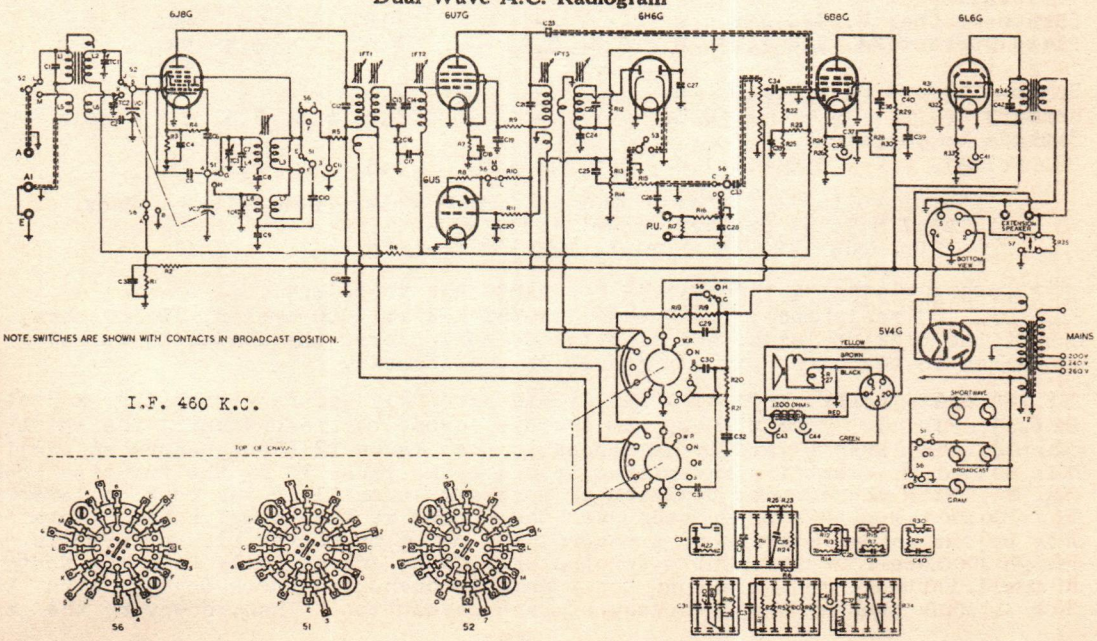
Dual Wave A.C. Receiver



HIS MASTER'S VOICE 429

Dual Wave A.C. Radiogram

I.F. 460 K.C.



HIS MASTER'S VOICE 429 (Contd.)

R1. 50,000 ohms 1W
R2. 30,000 ohms 2W
R3. 300 ohms ½W
R4. 50,000 ohms ½W
R5. 25,000 ohms 1W
R6. 100,000 ohms ½W
R7. 300 ohms ½W
R8. 500,000 ohms 1W
R9. 75,000 ohms 1W
R10. 10,000 ohms 1W
R11. 2meg. ¼ Watt
R12. 1meg. ¼ Watt
R13. 50,000 ohms ½W
R14. 150,000 ohms ½W
R15. 50,000 ohms ½W
R16. 1.5meg. ½Watt
R17. 100,000 ohms ½W
R18. 150,000 ohms ½W
R19. 150,000 ohms ½W
R20. 20,000 ohms ½W
R21. 3,000 ohms ½W
R22. 2meg. ¼ Watt
R23. 500,000 ohms ½W
R24. 1meg. ¼ Watt
R25. 500,000 ohms ½W
R26. 5,000 ohms ½W
R27. 0.5 ohms
R28. 3meg. ½W
R29. 500,000 ohms ½W
R30. 50,000 ohms ½W
R31. 50,000 ohms ½W
R32. 500,000 ohms ½W
R33. 170 ohms 3 Watt
R34. 500 ohms 1 Watt
R35. 33 ohms
C1. 50mmfd cond.
C2. 0.05mfd 200V
C3. 0.1mfd 400V
C4. 0.1mfd 200V
C5. 0.75mmfd neut. condenser
C6. 25mmfd
C7. 15mmfd
C8. 437mmfd
C9. 5,400mmfd
C10. 0.01mfd 600V
C11. 4mfd 350V elec.
C12. 100mmfd
C13. 50mmfd
C14. 50mmfd
C15. 0.5mmfd 400V
C16. 4,000 mmfd
C17. 0.05mfd 200V
C18. 0.1mfd 200V
C19. 0.02mfd 400V
C20. 0.02mfd 400V
C21. 100mmfd
C22. 100mmfd
C23. 50mmfd
C24. 50mmfd
C25. 500mmfd
C26. 250mmfd
C27. 0.05mfd 200V
C28. 200mmfd
C29. 0.01mfd 600V
C30. 1,000 mmfd
C31. 0.01mfd 600V
C32. 0.1mfd 200V
C33. 0.02mfd 400V
C34. 0.1mfd 400V
C35. 0.1mfd 200V
C36. 10mfd 25V el.
C37. 0.1mfd 400V
C38. 100mmfd
C39. 0.5mfd 400V
C40. 0.02mfd 600V
C41. 25mfd 25V
C42. 0.02mfd 600V
C43. 16mfd 350V elec.cond.Reg.type
C44. 16mfd 550V el.
VC1&VC2. 417mmfd 2 gang cond.
VR1. 1meg.pot. tapped 25,000 ohm
TC1,TC2,TC3 &TC4. air condenser
S1&S2. Wave change switch
S3. Static limSwt.
S4&S5.Tone Mon. "
S6. Radiogram "
L1&L2.B/c aer.coil
L3&L4.B/c osc.coil
L5&L6.S/W aer.coil
L7&L8.S/W osc.coil
1FT1.1st I.F.Trans.
1FT2.2nd I.F.Trans.
1FT3.3rd I.F.Trans.
T1. Output Trans.
T2. Mains trans.
Dial lamps 6.3V .3 amp.
12" dia.spkr.with elec. cond.
S7. Receiver speaker switch

VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to point of no reception broadcast band,with line voltage of 240 volts (mains transformer primary tap set for 240 volts). If a voltmeter having a resistance of less than 1000 ohms per volt is used,allowance must be made for the voltage drop caused by the voltmeter.

	6J8G						6U7G	6H6G	6B8G	6L6G	6U5	5V4G
	Amp. B.C.	Amp. S.W.	R.F.	Osc. B.C.	Osc. S.W.	R.G.						
Plate to Chassis Volts	290		292	150	140	148	290	-	50	275	270	390A.C.
Screen to Chas.V.	120	122	0	-	-	-	115	-	20	290	30	-
Plate Current MA.	1.6	2.2	0	5.3	6.9	-	9.0	-	0.4	78 ma total	0.6	-
Screen Current MA	3.2	3.0	0	-	-	-	2.3	-	-		-	-
Heaters	-	-	6.3	-	-	-	6.3	6.3	6.3	6.3	6.3	5.0
Cathode to Chassis Volts	3.0	3.2	1.6	3.0	3.2	1.6	3.6	-	1.5	14.0	-	-

Input volts to filter - 420V. Output volts from filter - 290V.
Total H.T. at Speaker Socket - 110 ma.
On Model 429, Osc. Plate Volts = 0 on "Gram."

SUPPLEMENTARY SERVICE INFORMATION FOR RADIOGRAM MODEL 429.
PICK-UP. DC resistance, 7,400 ohms. Impedance at 1000 cycles, 19,000 ohms. One of the pick-up leads, and also the screening over the leads, is to be connected to the black pick-up socket on the chassis.

THE AUTOMATIC BRAKE. HOW IT WORKS. (Read carefully before attempting adjustments.) Fig. 3. The pick-up arm travels across the record until the point is reached when lever L1 slowly commences to push lever L2 (Rubber-covered arm). This slight movement is transmitted to the brake lever L3 by the friction bearing BR. Note the correct position of tone arm lever L1 in the fork of lever L2. So long as the needle progresses over the record at the normal rate (obtained only by the actual playing of a record) the movement of the pick-up arm is not enough to move L3 sufficiently for the pawl CW to engage fully with the tooth D on the frictional collar around the turntable bush. The tooth engages with the face A, thus pushing the pawl away at each revolution. When, however, the end

of the record is reached and the spiral "run-in" groove gives the pickup arm a rapid movement, the increase in speed of movement is sufficient to cause the pawl CW to move far enough towards the turntable spindle for the tooth D to strike the face B,thus actuating the brake and operating switch of the motor. A faint regular click is normal with this type of brake.

ADJUSTMENT OF BRAKE. If at any time the spring SP1 on the hand brake is renewed or replaced,make sure that the axis of the spring lies as far distant as possible from the centre of the pivot of the HB lever,otherwise the friction brake may fail to operate in conjunction with the automatic stop. If auto brake does not function increase the friction at BR by removing the Isle-O'-Man washer and bending the arms in order to increase the effective thickness.Too much friction at BR may cause a hollow knocking sound to be transmitted to the pick-up,and may also cause undue record wear. If a knocking sound is heard from speaker,slightly decrease the friction at BR,but do not apply oil.

TONE MONITOR. On Model 429,when in use as an Electric Gramophone,the Tone Monitor is effective only in the three middle positions,i.e. "NORMAL", "BASS", and"SPEECH". The "speech" position may be found useful when playing at great volume records which have very heavy bass passages,such as certain organ recordings. The "Bass" position will reduce surface noise on old or worn recordings.

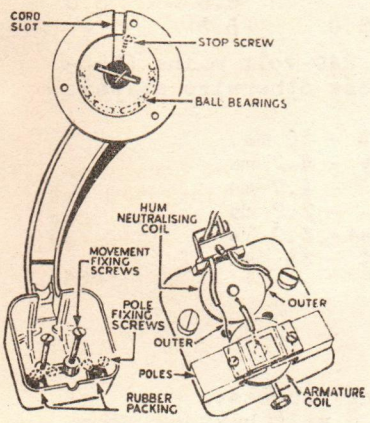


Fig. 1

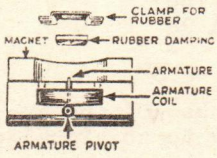


Fig. 2

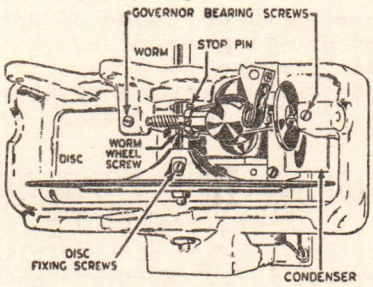


Fig. 4

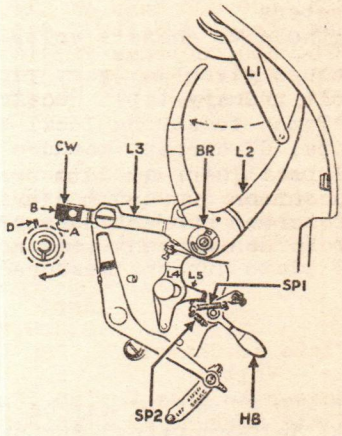
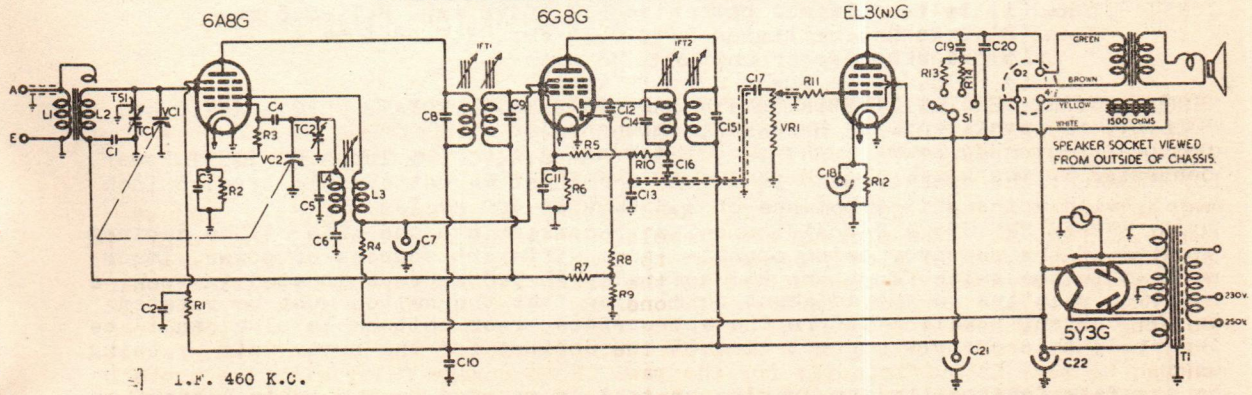


Fig. 3

HIS MASTER'S VOICE 449

4-Valve Broadcast Band A.C. Mantel Receiver



CONSUMPTION: 56 watts. WAVE-LENGTH RANGE: 200 to 550 metres,or1500 to 545 kc.
MAX.UNDISTORTED POWER OUTPUT: 2.0 watts. LOUDSPKR.: Model 449 - 6" cone spkr.
DC res.of field,cold - 1500 ohms. DC res. of voice coil - 2.3 ohms.
400 cycle impedance of voice coil 2.7 ohms.

HIS MASTER'S VOICE 449 (Contd.)

R1. 25000 ohms 1W
R2. 200 ohms ½W
R3. 50000 ohms ½W
R4. 30000 ohms 2W
R5. 500000 ohms ½W
R6. 250 ohms ½W
R7. 2meg. ¼W
R8. 500000 ohms ½W
R9. 500000 ohms ½W
R10.50000 ohms ½W
R11. 50000 ohms ½W
R12. 130 ohms 3W
R13.10000 ohms ½W
R14. 4000 ohms ½W

C1. 0.05mfd 200V
C2. 0.1mfd 400V
C3. 0.1mfd 200V
C4. 25mmfd
C5. 20mmfd
C6. 400mmfd
C7. 8mfd 515PV elec.cond.
C8. 100mmfd
C9. 50mmfd
C10. 0.25mfd 400V
C11. 0.1mfd 200V
C12. 50mmfd
C13. 100mmfd

C14. 100mmfd
C15. 100mmfd
C16. 250mmfd
C17. 0.01mfd 600V
C18. 25mfd 25V
C19. 0.05mfd 400V
C20. 0.002mfd 600V
C21. 8mfd 515PV elec. cond.
C22. 8mfd 515PV elec. cond.
VC1&VC2. 380mmfd 2 gang cond.
VR1. 1meg.pot.

Dial lamp 6.3V .3 amp.
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F.Trans.
6" speaker
T1. Mains Trans.
S1. Tone Monitor Switch
L1&L2. B/C aer.coil
L3&L4. B/C Osc.coil
TC1&TC2. air trimm. 1.5-18mmfd
TS1. fixed trimmer shunt 7.0mmfd

VOLTAGE TABLE

	V1 Amplr.Sect.	Osc. Sect.	V2 (6G8G)	V3 (EL3(N)G)	V4 5Y3G
Plate to chassis volts	235	125	235	218	-
Screen to chassis volts	100*	-	135*	235	-
	95	-	125	262	-
Heaters	-	6.3	6.3	6.3	5.0
Cathode to chassis volts	-2.3	-	-2.6	-5.3	-

Values given may vary plus or minus 10% and are taken on 240-volt mains (250-volt primary tap). Receiver tuned to no signal point unless otherwise stated.
*Tuned to strong local station.
Total HT current measured at terminal 4 of speaker socket - 55 ma.
V1 oscillator anode current measured at + side of primary - 4.2 ma.
V1 screen current measured at dropping resistor - 4.7 ma
V2 screen current measured at V2 socket - 2.2 ma.
V3 screen current measured at screen terminal of V3 socket- 3.9 ma.
V3 plate current measured at terminal 4 of speaker socket - 34 ma.

HIS MASTER'S VOICE 600

4-Valve Portable Receiver

LT AND HT SUPPLY may be obtained from any of the following sources:
(1) Self-contained dry batteries. L.T.: One Ever-Ready 1.5 volt battery (Type P.R. 8). H.T.: Two Ever-Ready 45 volt batteries (Type P.R.45).
(2) External dry batteries. L.T.: One Ever-Ready 1.5 volt battery (Type X250). H.T.: Two Ever-Ready 45 volt batteries (Type Superdyne or Heavy Duty).
(3) External vibrator power unit with 2 volt accumulator. (4) External AC mains power unit.
CONSUMPTION: (1) Self-contained batteries L.T.-0.25 amp. H.T.-8.5 ma.
(2) External batteries L.T.-0.25 amp. H.T. 8.5 ma.
(3) Vibrator power unit - 1.25 amps.
(4) A.C. mains power unit 19 watts.
SPEECH OUTPUT: 200 milliwatts (plate circuit). INTERMEDIATE FREQ.: 457.5 kc.
WAVE-LENGTH RANGE: 200-545 metres (1500-550 kc).
VALVES: 1A7GT Converter. 1N5GT I.F. 1H5GT Demod.A.V.C. & 1st A.F. 1Q5GT Power.
LOUDSPEAKER: The speaker used is of the permanent magnet dynamic type. 5 inch model, with voice coil impedance of 3.6 ohms at 400 cycles.
POWER SUPPLY SWITCH. A 3-position switch recessed into the side of the cabinet permits of the receiver being operated from different sources of power. Incorporated in the switch knob are two specially shaped keyways located in such a position relative to the adjacent octal plug that the switch must be rotated to the correct position before the appropriate power unit cable plug can be inserted; this ensures correct circuit connections for the power unit being used.
As a safety feature,aswitch locking bracket is mounted on the cabinet back, so that access to the chassis cannot be obtained without first removing the external power unit plug from the receiver and turning the power supply switch to the "Ext. Batt. or Vib." position.

The functions performed by the switch in its different positions are:
"VIB. OR EXT. BATT." POSITION. The valve filaments are parallel connected and the receiver LT+and HT+leads are switched from the internal batteries to the vibrator power unit or external batteries according to which is connected.
"INT.BATT." POSITION. The valve filaments are parallel connected and the receiver LT+and HT+leads are switched to the internal batteries.
"AC MAINS UNIT" POSITION. The receiver LT+and HT+leads are switched from the internal batteries to the mains unit.
The valve filaments are series connected and an 84 ohm bleed resistor is briged across the three 50 ma. filaments,inorder to allow of a 100 ma. current through the filament chain.

Zero bias operation of the converter and I.F. valves for weak signals is retained by means of a special arrangement of the A.V.C. filter network. The effective value of the 750 ohm power valve bias resistor is reduced by means of a shunt resistor in order to compensate for the extra bias voltage introduced by the voltage drop across the three preceding valve filaments.

TONE CONTROL AND ON-OFF SWITCH. This is a four-pole three-position switch with the following functions: OFF LT positive circuit open. HT negative circuit open. When receiver is vibrator or mains operated the vibrator or mains circuit is open. ON LT circuit closed. HT circuit closed. When receiver is vibrator or mains operated the vibrator or mains circuit is closed. BASS As in last position, but audio-frequency top cut is introduced by means of a condenser across the power valve plate circuit.

VIBRATOR POWER UNIT. The circuit of the vibrator unit is indicated on next page. This unit includes the vibrator cartridge,which is enclosed in a separate metal container so that it can be plugged into or removed from a socket located in the vibrator unit in a manner similar to a valve. The vibrator socket is arranged with a sponge rubber mounting to ensure a minimum of mechanical noise. The remainder of the unit consists of the necessary transformers and filters. The LT filter choke included is designed to have the correct resistance to enable the 1.4 volt filaments to be safely operated from a 2 volt accumulator.

IMPORTANT NOTE - It is essential that the resistance of the 5-amp.fuse in the vibrator positive LT circuit should not exceed 0.01 ohm,otherwise the performance will suffer. Use only Australux 5 amp. fuse, type 1AG.

AC MAINS UNIT. This unit is designed to operate on AC mains supply voltages of from 200 to 260 volts at a periodicity of 40 to 60 cycles;the voltage tap panel inside the unit should be set as follows:

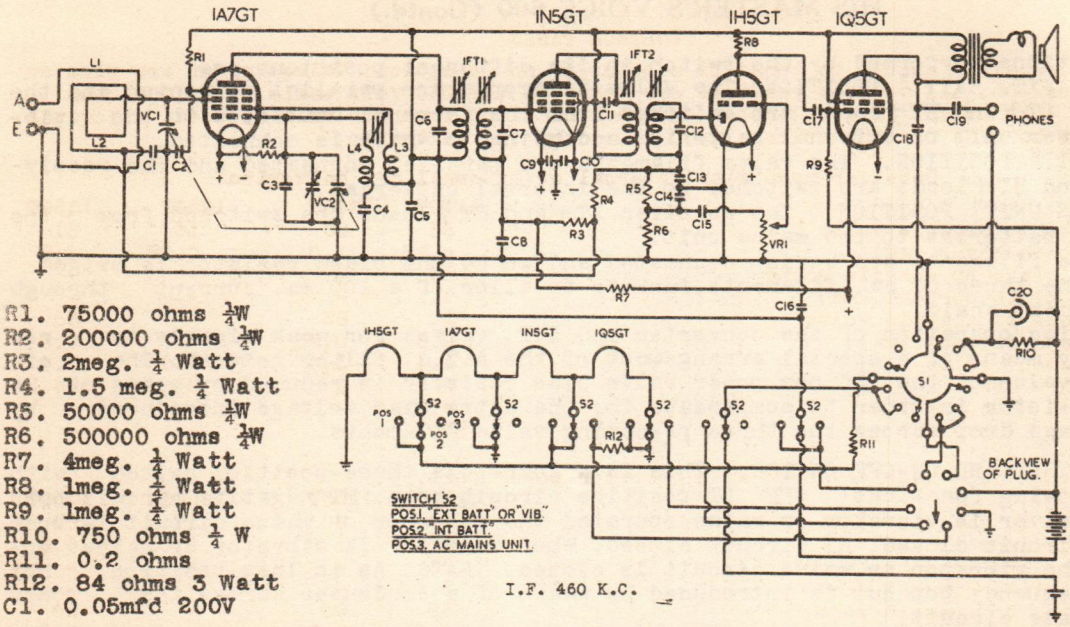
Voltage of A.C. supply	Use tap designated
200-220 volts	200
221-240 volts	240
241-260 volts	260

NOTE: Due to heat being radiated by the rectifier valve,it is quite normal for the outside metal case to become warm during operation. The A.C. mains unit essentially consists of a transformer with a tapped H.T. secondary connected to the elements of a 25Z6G valve,so that it functions as a twin half-wave rectifier.

The output from each rectifier is separately filtered,one supplying H.T. and the other L.T. voltage. The 15 ohm resistor connected from LT - to HT - provides portion of the power valve grid bias,the remainder being obtained from the voltage drop across the three preceding filaments in the series connected filament chain. The 400mfd elec. condenser provides additional L.T. filtering for the 50 ma. valve filaments; it is brought into circuit when the power unit is plugged into the receiver.

IMPORTANT - Rectifier replacement - Should it become necessary to replace the 25Z6G valve,the following procedure should be carried out after replacement and before switching the receiver on: (1) Rotate switch mounted on transformer case to extreme anti-clockwise position. (2) Insert milliammeter in LT+circuit.
(3) Switch on mains supply and, after checking that the mains voltage is normal for the mains transformer tap used,set switch to give correct LT current - within the limits of 95-100 ma. This procedure compensates for the varying rectifying efficiency of different valves by introducing a series resistance in the LT rectifier circuit.

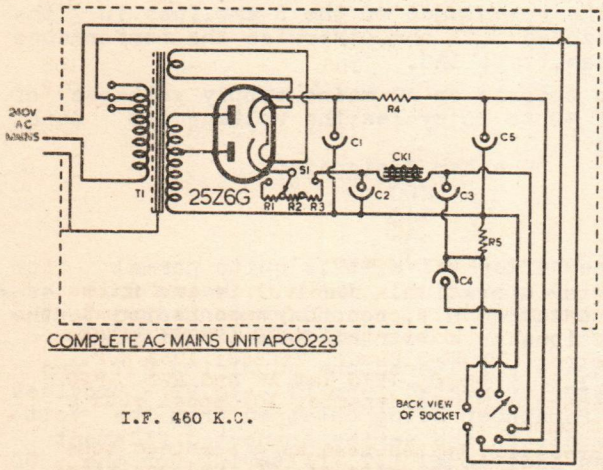
HIS MASTER'S VOICE 600 (Contd.)



I.F. 460 K.C.

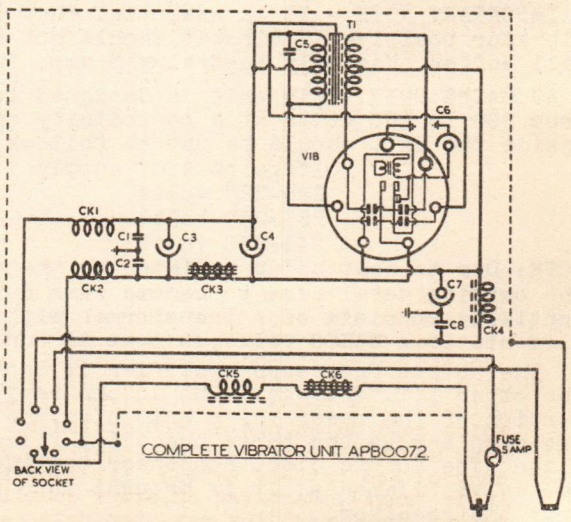
R1. 75000 ohms ¼W
R2. 200000 ohms ¼W
R3. 2meg. ¼ Watt
R4. 1.5 meg. ¼ Watt
R5. 50000 ohms ¼W
R6. 500000 ohms ¼W
R7. 4meg. ¼ Watt
R8. 1meg. ¼ Watt
R9. 1meg. ¼ Watt
R10. 750 ohms ¼ W
R11. 0.2 ohms
R12. 84 ohms 3 Watt
C1. 0.05mfd 200V

C2. 0.01mfd 600V
C3. 20mmfd
C4. 411mmfd
C5. 0.1mfd 200V
C6. 100mmfd
C7. 50mmfd
C8. 0.02mfd 300V
C9. 0.1mfd 200V
C10. 0.1mfd 200V
C11. 100mmfd
C12. 100mmfd
C13. 100mmfd
C14. 100mmfd
C15. 0.01mfd 600V
C16. 0.1mfd 200V
C17. 0.01mfd 600V
C18. 0.015mfd 600V
C19. 0.02mfd 400V
C20. 10mfd 25V elec.cond.
VC1&VC2. 2 gang con.
VR1. 1meg. pot.
S1. Battery & Tone Cont. switch
S2. Power Sup.Switch
5" permag.spkr.
1FT1. 1st I.F.Trans.
1FT2. 2nd I.F.Trans.
L1&L2.Aerial coil
L3&L4. Osc. coil
External battery lead.



COMPLETE AC MAINS UNIT APC0223

I.F. 460 K.C.



COMPLETE VIBRATOR UNIT APB0072

R1. 15 ohms W/W
R2. 15 ohms W/W
R3. 20 ohms W/W
R4. 5000 ohms 3W
R5. 15 ohms 3W
C1. 12mfd 350PV elect.
C2. 100mfd 75PV elect.
C3. 24mfd 150PV elect.
C4. 400mfd 12PV elect.
C5. 16mfd 350PV elect.
CK1. LT choke
T1. Mains trans.
S1. Switch

C1.0.1mfd200V con.
C2.0.1mfd200V con.
C3.24mfd 150PV elec.cond.
C4.8mfd 525PVelec.
C5..007mfd 1000V
C6.50mfd 40V elec.
C7.400mfd 12PV "
C8. 0.1mfd200V con
CK3. HT Choke
CK1&CK2. Double R.F. Choke
CK4 & T1.R.F.Choke HT & Vib.Trans.
CK5. RF Choke LT
CK6. LT Choke
VIB. Oak 2V split reed vibrator
Battery lead lead & socket

HIS MASTER'S VOICE 600 (Contd.)

VOLTAGE TABLE

The receiver should be tuned to a point of no reception. Values given are plus or minus 10%. All voltage readings are taken on the 250 volt scale of a 1000 ohms per volt meter. If a voltmeter of less than 1000 ohms per volt is used, allowance must be made for the voltage drop caused by the voltmeter.

Receiver used with internal or external dry batteries.

	1A7GT	1N5GT	1H5GT	1Q5GT
Plate to chassis volts	83	83	16	81
Plate current (ma)	0.25	1.0	0.02	4.9
Osc.plate to chassis volts	83	-	-	-
Osc.plate current (ma)	1.1	-	-	-
Screen to chassis volts	32	83	-	83
Screen current (ma)	0.6	0.25	-	0.5
Filament volts	1.4	1.4	1.4	1.4
Bias volts	0	0	0	-6.5
Total HT current ma	8.6	-	-	-
Total LT current ma	250	-	-	-

Receiver used with vibrator power unit.

	1A7GT	1N5GT	1H5GT	1Q5GT
Plate to chassis volts	90	90	17	87
Plate current (ma)	0.3	1.2	0.03	5.2
Osc.plate to chassis volts	90	-	-	-
Osc.plate current (ma)	1.2	-	-	-
Screen to chassis volts	35	90	-	90
Screen current (ma)	0.7	0.3	-	0.5
Filament volts	1.4	1.4	1.4	1.4
Bias volts	0	0	0	-7.0
Total HT current (ma)	9.4	-	-	-
Total LT current (ma)	250	-	-	-

Receiver used with AC mains unit

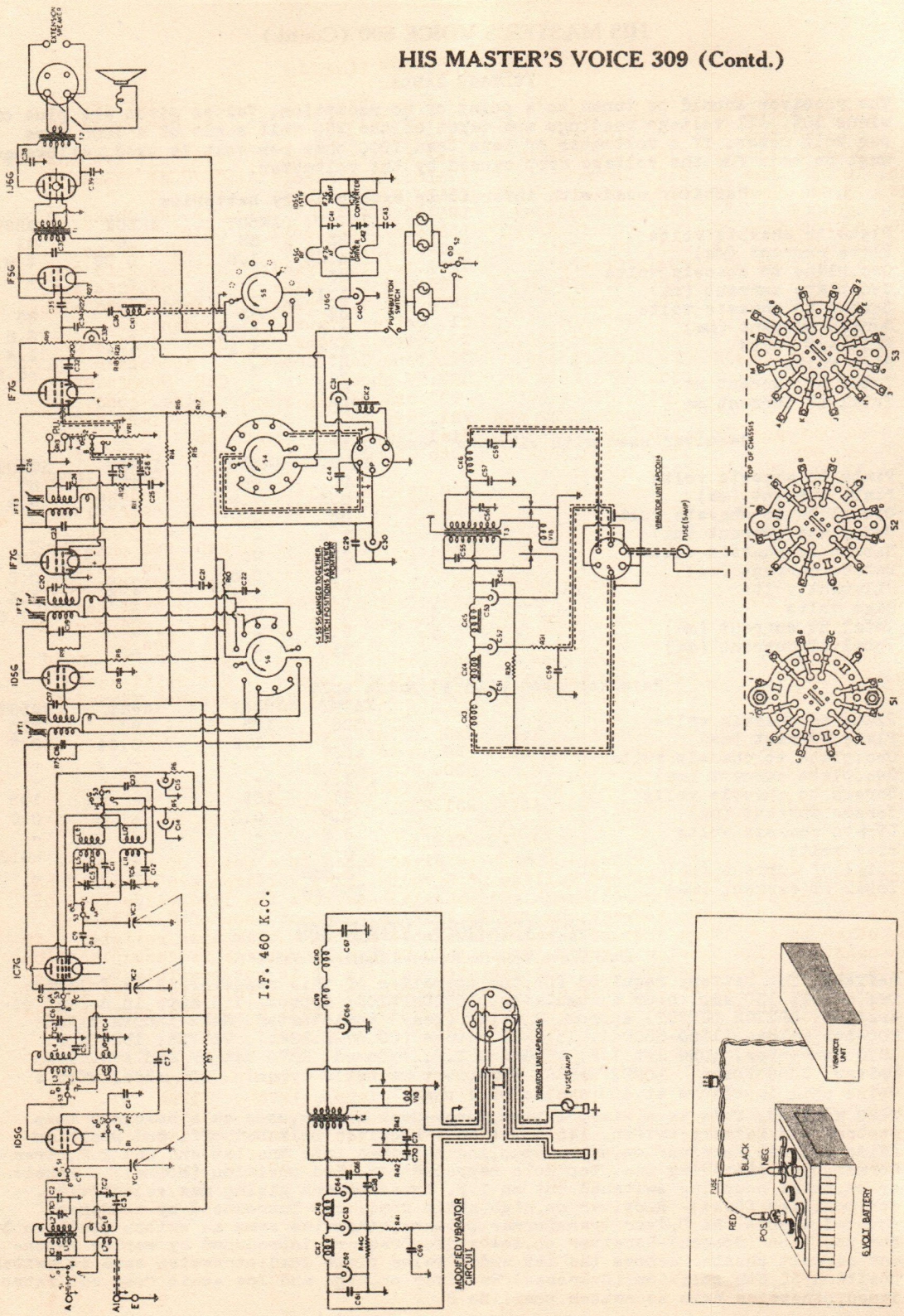
	1A7GT	1N5GT	1H5GT	1Q5GT
Plate to chassis volts	105	105	20	100
Plate current (ma)	0.3	1.2	0.04	8.7
Osc.plate to chassis volts	105	-	-	-
Osc.plate current (ma)	1.4	-	-	-
Screen to chassis volts	41	105	-	105
Screen current (ma)	0.8	0.3	-	0.9
LT+to chassis volts	5.6	-	-	-
Bias volts	0	0	0	-6.0
Total HT current (ma)	13.6ma	-	-	-
Total LT current (ma)	100 ma	-	-	-

HIS MASTER'S VOICE 309

Dual Wave Vibrator Powered Battery Receiver

BATTERY: The battery required for the operation of this receiver is as follows: One 6-volt 150 amp. hour accumulator. CONSUMPTION: approx. 1.3 amps in normal operation. SPEECH OUTPUT: approx. 2 watts (peak) undistorted. WAVE-LENGTH RANGE: 200-545 metres (1500-550kc). 13.9-51 metres (29.57-5.88mc). VALVES: 1D5G R.F. 1C7G Converter. 1D5G 1st I.F. 1F7G 2nd I.F. & Demod. 1F7G 1st AF and AVC. 1F5G Driver. 1J6G Power. LOUDSPEAKER: Permanent magnetic dynamic. 10" model with a voice coil impedance at 400 cycles of 3 ohms.

TONE MONITOR. This is a six-position, three-deck switch, used as a combined tone control and battery switch. 1st position - Receiver switched off. 2nd position-(Wide range). Receiver on, extra coupling switched into the 1st and 2nd I.F. tranformer, thus providing max. top note reproduction. 3rd position (Normal) - Receiver on, extra coupling switched out on I.F. transformers giving max. selectivity. 4th position (Bass)- Receiver on, high audio freq. cut introduced by condenser shunted across the Driver transformer primary, otherwise same as switch position 3. 5th position (Speech)-Receiver on, low audio freq. cut introduced by series resonant circuit shunted across the 1st audio valve plate load; otherwise same as switch position 3. 6th position (Overseas)-Receiver on, high and low audio freq. cut introduced, otherwise same as switch position 2.


I.F. 460 K.C.
MODIFIED VIBRATOR CIRCUIT
VIBRATOR UNIT
6 VOLT BATTERY
BLACK
NEG.
RED
POS.
FUSE
TOP OF CHASSIS

HIS MASTER'S VOICE 309 (Contd.)

R1.50000 ohms ¼W
R2.100,000 ohms ¼W
R3. 50,000 ohms ¼W
R4. 50,000 ohms ¼W
R5. 10,000 ohms ¼W
R6. 75,000 ohms ¼W
R7. 200,000 " "
R8. 50,000 ohms ½W
R9. 200,000 " ½W
R10.2,000 ohms ¼W
R11.250,000 " "
R12.50,000 " "
R13.100,000 " "
R14.1meg. ½ Watt
R15.250,000 ohms ¼W
R16.750,000 " "
R17.250,000 " "
R18.750,000 " "
R19.50,000 ohms ¼W
R20.150,000 " "
R21.50,000 ohms ¼W
R22.100,000 ohms "
R23.500,000 ohms "
C1. 100mmfd cond.
C2. 25mmfd
C3. 05mfd 300V
C4. .1mfd 200V
C5. .05mfd 300V
C6. 25mmfd
C7. .25mfd 400V
C8. Neut.cond.
C9. 50mmfd
C10. 40mmfd
C11. 555mmfd
C12. 5400mmfd
C13. .01mfd 400V
C14. 16mfd 250V with C30
C16. 100mmfd
C15. 4mfd 100V elec.cond.
C17. 100mmfd
C18. .1mfd 200V
C19. 100mmfd
C20. 100mmfd
C21. .01mfd 400V
C22. .05mfd 300V
C23. 100mmfd
C24. 100mmfd
C25. 100mmfd
C26. 50mmfd
C27. 100mmfd
C28. .02mfd 400V
C29. .02mfd 400V
C30. 8mfd 250V (With C14 elec.
C31. 500mfd 6V WKG with C40
C32. .1mfd 200V
C33. 4mfd 100V elec.cond.
C34. 250mmfd
C35. .02mfd 400V
C36. .25mfd 400V
C37. .02mfd 400V
C38. .015mfd 600V
C39. " "
C40. 500mfd 6V WKG with C31
C41. .1mfd 200V
C42. .1mfd 200V
C43. .1mfd 200V
C44. .5mfd 200V
VC1,VC2&VC3. 11.5-505mmfd 3 gang con.
TC1,TC2,TC3,TC4, TC5&TC6-Air trimm.
L1&L2.B/C aer.coil
S1,S2&S3.Wave Change Switch
S4,S5&S6. Tone cont.& Batt.Swtch
L7&L8.S/W aer.coil
L3&L4.B/C det.coil
L9&L10.S/W " "
L5&L6.B/C osc.coil
L11&L12.S/W Osc."
1FT1.1st I.F.Trans.
1FT2.2nd I.F.Trans.
1FT3.3rd I.F.Trans.
T1. Driver Trans.
T2. Output Trans
CK1.Tone Cont.Choke
CK2.LT choke
10" dia.permag.spkr.
VR1.1meg.pot.
dial lamps 6.3V .15 to .3 amp

VIB.UNIT APC0114.

CK3. RF Choke HT
CK4. HT Choke
CK5. HT Choke
CK6. RF Choke LT
T3. Vib.Trans.
C51,C52&C53.4mfd+4mfd+4mfd elec. cond.
C54..5mfd 300V Con.
C55..002mfd Cond.
C56..02mfd 400V Con
C57..5mfd 300V "
C58..001mfd Cond.
C59..5mfd 200V "
R30. 200 ohms 3W Wire Resis.
R31.250,000 ohms ½W
VIB.Split Reed synchon.Vibrator

VIB.UNIT APB.0046

CK7. HT Choke
CK8. " "
CK9. RF Choke LT
CK10. " " "
T4. Vib.Trans.
C61. .002mfd Con.
C62,C63,&C64.4mfd+4mfd+4mfd elec. condenser
C65. .5mfd 400V condenser
C66. 500mfd 6V elec. cond.
C67. .1mfd 200V
C68. " "
C69. " "
C70. .02mfd 1500V condenser
C71. .02mfd 1500V condenser
R40. 200 ohms 3W Wire resis.
R41. 500,000 ohms ½ Watt Resis.
R42. 1,000 ohms ½W Res.
R43. " " " "
VIB.Split Reed Synchon.Vibrator.

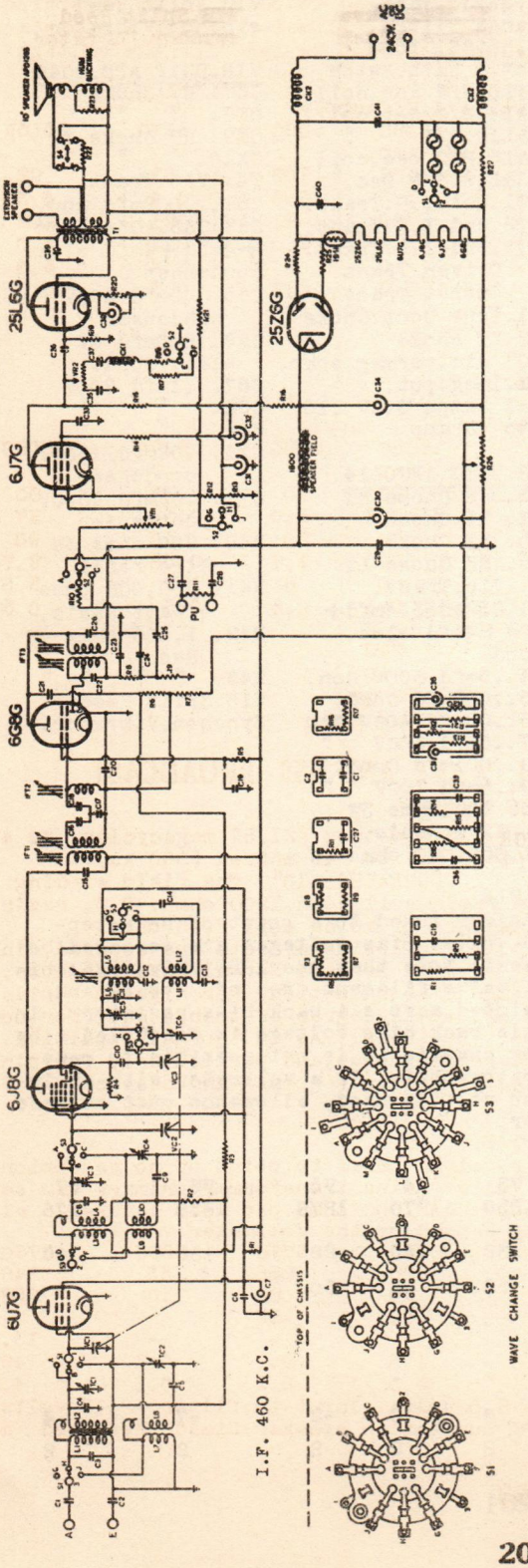
VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to a point of no reception and a low tension battery voltage of 6 volts. Bias voltages are measured between the negative side of filament and chassis.Note that the 1F5G valve (V6) bias is secured from two sources,one,due to a valve filament drop of 2 volts and the other to a voltage drop of 5 volts developed across a back bias resistor in the negative high tension circuit. Since this back bias voltage is decoupled by means of a ½ megohm resistor in the vibrator chassis it is not possible to measure it at the receiver,but only at the vibrator unit. If a voltmeter with an internal resistance of less than 1000 ohms per volt is used, allowance must be made for the voltage drop caused by the voltmeter.

	V1 1D5G	V2 1C7G	V3 1D5G	V4 1F7G	V5 1F7G	V6 1F5G	V7 1J6
Plate to chassis volts	140	140	132	140	28	138	140
Screen to chassis volts	BC 38 SW 56	45	58	58	30	-	-
Oscillator plate to Chassis volts	-	115	-	-	-	-	-
Bias voltages	-2	0	0	0	-2	-7	-4
Filament voltages	2	2	2	2	2	2	2

HIS MASTER'S VOICE 619

6-Valve Dual Wave A.C./D.C. Receiver



CONSUMPTION: 240 volts AC mains: 103 watts
240 volts DC mains: 86 watts
WAVE LENGTH RANGE: B.C.: 200 metres (1500 Kc), to 545 metres (550 Kc).
S.W.: 13.9 metres (21.57 Mc) to 47 metres (6.38 Mc).
MAX. UNDISTORTED POWER OUTPUT: 1.75 watts.
LOUDSPEAKER: Electro dynamic type with 10" cone.
DC resistance of field coil (cold) 1800 ohm.
DC resistance of voice coil 2 ohms
400 cycle impedance of voice coil 2.35 ohms

VALVES: 6U7G R.F. 6J8G Converter. 6G8G I.F. Demod. and AVC. 6J7G A.F. 25L6G Power. 25Z6G Rectifier. 1941 Barretter.

VENTILATING COWL. The barretter and pilot lamp shunt resistor are enclosed in an asbestos-lined metal ventilating cowl insulated from chassis, which conducts the heat outside the cabinet; thus the temperature inside the cabinet is kept relatively low and deterioration of the cabinet finish is avoided.

R1. 2000 ohms ½W
R2. 100,000 ohms ½W
R3. 1meg. ½ Watt
R4. 50,000 ohm ½W
R5. 5000 ohms ½W
R6. 0.5meg. ½ Watt
R7. 0.5meg. ½ Watt
R8. 50,000 ohm ½W
R9. 250,000 ohm ½W
R10. 1meg. ½ Watt
R11. 100,000 ohms ½W
R12. 25 ohms
R13. 4000 ohms ½W
R14. 1.5meg. ½ Watt
R15. 250,000 ohms ½W
R16. 100,000 ohms ½W
R17. 50,000 ohms ½W
R18. 10,000 ohms ½W
R19. 0.5meg. ½ Watt
R20. 150 ohms 3 Watt
R21. 150 ohms ½Watt
R22. 2.4 ohms
R23. 0.5 ohms
R24. 100 ohms 3 Watt
R25. 100 ohms 3 Watt
R26. 50 ohms Voltage Divider
R27. 90 ohms 20 Watt
C1. 0.002mfd
C2. 0.005mfd
C3. 50mmfd
C4. 15mmfd
C5. 0.05mfd 200V
C6. 0.1mfd 400V
C7. 24mfd 300V WKG 350PV with C32
C8. 15mmfd
C9. 0.05mfd 200V
C10. 50mmfd
C11. 25mmfd
C12. 460mmfd
C13. 5400mmfd
C14. 0.01mfd 600V
C15. 50mmfd
C16. 100mmfd
C17. 0.008mfd
C18. 100mmfd
C19. 0.1mfd 400V
C20. 0.05mfd 300V
C21. 50mmfd
C22. 100mmfd
C23. 100mmfd
C24. 100mmfd
C25. 0.02mfd 400V
C26. 100mmfd
C27. 0.01mfd
C28. 0.01mfd
C29. 0.5mfd 400V
C30. 30mfd 300V WKG 350PV
C31. 50mfd 25V
C32. 8mfd 300V WKG 350PV with C7
C33. 0.25mfd 200V
C34. 20mfd 450V WKG 500 PV
C35. 0.02mfd 400V
C36. 0.02mfd 400V
C37. 0.25mfd 400V
C38. 50mfd 25 volt
C39. 0.02mfd 400V
C40. 0.01mfd
C41. 0.01mfd

VC1, VC2, & VC3. 417mmfd 3 gang condenser
S1, S2 & S3. Wave change switch
S4. Receiver speaker switch
L1 & L2. Broadcast aerial coil
L3 & L4. Broadcast detector coil
L5 & L6. Broadcast oscillator coil
L7 & L8. Short Wave aerial coil
L9 & L10. Short Wave Detector coil
L11 & L12. Short Wave oscillator coil
1FT1. 1st I.F. trnasformer
1FT2. 2nd I.F. transformer
1FT3. 3rd I.F. transformer
T1. Output transformer
CK1. Tone control choke
CK2. Mains filter choke
VR1 & VR2. 1 megohm potentiometer

10 inch speaker & electrolytics

Dial lamps 3.2V 0.35 amp.

TC1. Air trimmer
TC2. " "
TC3. " "
TC4. " "
TC5. " "
TC6. " "

HIS MASTER'S VOICE 619 (Contd.)

VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to point of no reception, broadcast band,with line voltage of 240 volts. If a voltmeter having a resistance of less than 1000 ohms per volt is used,allowance must be made for the voltage drop caused by the voltmeter.

Receiver used on 240 volts A.C. supply

	6U7G	6J8G Osc.	6J8G Amp.	6G8G	6J7G	25L6H
Plate chassis volts	102	88	102	102	51	92
Plate current (ma)	6.8	3.0	1.5	6.8	0.4	4.3
Screen chassis volts	89		89	91	21	102
Screen current (ma)	2.0		2.2	2.0	0.1	3.0
Cathode chassis volts	0		0	0	1.4	6.4
Heater current (AC amps)	0.3		0.3	0.3	0.3	0.3
Voltage across back-bias resistor	2.5					
Input to filter volts	254					
Output from filter volts	102					
Total H.T. current	71 ma					

Receiver used on 240 volts D.C. supply

	6U7G	6J8G Osc.	6J8G Amp.	6G8G	6J7G	25L6G
Plate chassis volts	90	78	90	90	43	80
Plate current (ma)	6.0	2.6	1.3	6.0	0.34	37
Screen chassis volts	78		78	80	17	90
Screen current (ma)	1.8		2.0	1.7	0.08	2.7
Cathode chassis volts	0		0	0	1.2	5.5
Heater current (amps.)	0.3		0.3	0.3	0.3	0.3
Voltage across back bias resistor			2.2			
Input to filter volts			218			
Output from filter volts			90			
Total H.F. current			59 ma			
Pilot lamp current			0.3 amp			

HIS MASTER'S VOICE 669 DUAL WAVE AND 559 BROADCAST

5-Valve A.C. Receivers

CONSUMPTION: 82 watts. WAVE-LENGTH RANGE: 13.9 metres (21.57 megacycles) to 47 metres (6.38 megacycles). 187.5 metres (1600 kc) to 545 metres (550 kc). MAX. UNDISTORTED POWER OUTPUT: 4.5 watts. LOUDSPEAKER: 10". The field winding acts as filter choke. D.C. resistance of field coil,cold 1900 ohms. D.C. resistance of voice coil 2 ohms. 400 cycle impedance of voice coil 2.35 ohms.
TONE MONITOR. This is a 4-position switch.The following effects are secured in the various switch positions: 1st position (Wide Range): Normal bass response, and treble boosted to compensate for side-band attentuation. For highest fidelity. 2nd position (Normal): Normal bass and small degree of treble cut. For normal and long-distance reception. 3rd position (Bass): As in "Normal" position , but additional treble cut,for reduced background noise,and particularly for pick-up operation. 4th position (Speech): Boosted treble response and bass cut, for improved intelligibility of speech.

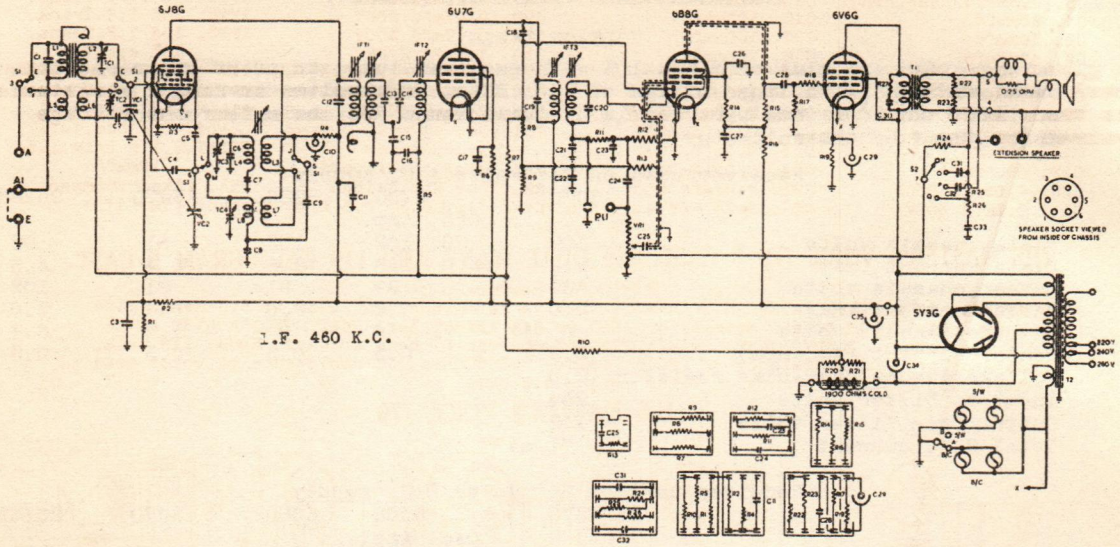
VOLTAGE TABLE

Values given are plus or minus 10% with receiver tuned to point of no reception, broadcast band,with line voltage of 240 volts (mains transformer primary tap set for 240 volts). If a voltmeter having less than 1000 ohms per volt is used, allowance must be made for the voltage drop caused by the voltmeter.

		6J8G	6U7G	6B8G	6V6G
Plate to chassis volts		258	258	35	248
Screen to chassis volts	B/C Band	90	84	10	258
" " " "	S/W "	100	92		
Cathode to chassis volts		-	-	-	13.0
Plate currents M/A		1.5	9.1	0.3	46
Screen current M/A		3.5	2.2	0.1	4.8

Rectifier filament - 5.2 volts. Heater - 6.5 volts. Input to filter - 418 volts. Output from filter - 260 volts. Total HT current in speaker field (Measured at socket) = 75M/A.

HIS MASTER'S VOICE 669 (Contd.)



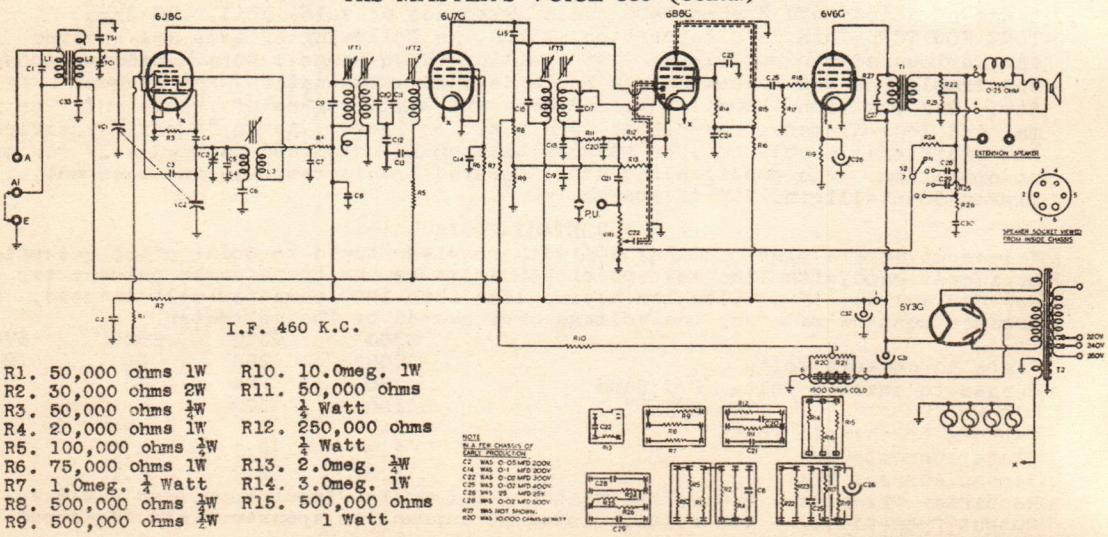
R1. 50,000 ohms 1W
R2. 30,000 ohms 2W
R3. 50,000 ohms ½W
R4. 20,000 ohms 1W
R5. 100,000 ohms ½W
R6. 75,000 ohms 1W
R7. 1meg. ½ Watt
R8. 500,000 ohms ½W
R9. 500,000 ohms ½W
R10. 10meg. 1 Watt
R11. 50,000 ohms ½W
R12. 250,000 ohms ½W
R13. 2meg. ½ Watt
R14. 3meg. 1 Watt
R15. 500,000 ohms 1W
R16. 50,000 ohms 1W
R17. 500,000 ohms ½W
R18. 50,000 ohms ½W
R19. 250 ohms 3 Watt
R20. 20,000 ohms ½W

R21. 150,000 ohms ½W
R22. 100 ohms ½ Watt
R23. 100 ohms ½ Watt
R24. 7,500 ohms ½W
R25. 1000 ohms ½ Watt
R26. 300 ohms ½ Watt
R27. 100 ohms ½ Watt
C1. 100mmfd
C2. 0.05mfd 200V
C3. 0.05mfd 400V
C4. 0.3mmfd neut.cond.
C5. 25mmfd
C6. 15mmfd
C7. 437mmfd
C8. 5400mmfd
C9. 0.01mfd 600V
C10. 4mfd 350PV elec.cond.
C11. 0.5mfd 400V
C12. 100mmfd
C13. 50mmfd

C14. 50mmfd
C15. 5000mmfd
C16. 0.05mfd 200V
C17. 0.1mfd 400V
C18. 50mmfd
C19. 100mmfd
C20. 100mmfd
C21. 100mmfd
C22. 0.1mfd 200V
C23. 100mmfd
C24. 0.02mfd 300V
C25. 0.1mfd 400V
C26. 0.1mfd 400V
C27. 0.5mfd 400V
C28. 0.02mfd 600V
C29. 5mfd 25V elec.con.
C30. 0.02mfd 600V
C31. 0.01mfd 600V
C32. 0.02mfd 300V
C33. 1.0mfd 200V
S1. Wave Change Swtch.

C34. 16mfd 550V elec. Cond.
C35. 16mfd 350V reg. type
VC1&VC2.417mmfd 2 gang cond.
VR1. 1meg.pot.tapped
S2. Tone Mon.Switch
Dial lamp 6.3V o.3amp
1FT1. 1st I.F.Trans.
1Ft2. 2nd I.F.Trans.
IFT3. 3rd I.F.Trans.
10" speaker
T1. Output Trans.
T2. Mains Trans.
L1&L2. B/C aer.coil
L3&L4. B/C osc.coil
L5&L6.S/W aer.coil
L7&L8.S/W Osc.coil
TC1,TC2,TC3&TC4- air trim.1.5-18mmfd

HIS MASTER'S VOICE 559 (Contd.)



R1. 50,000 ohms 1W
R2. 30,000 ohms 2W
R3. 50,000 ohms ½W
R4. 20,000 ohms 1W
R5. 100,000 ohms ½W
R6. 75,000 ohms 1W
R7. 1.0meg. ½ Watt
R8. 500,000 ohms ½W
R9. 500,000 ohms ½W
R10. 10.0meg. 1W
R11. 50,000 ohms ½ Watt
R12. 250,000 ohms ½ Watt
R13. 2.0meg. ½W
R14. 3.0meg. 1W
R15. 500,000 ohms 1 Watt

R16.50,000 ohms 1W
R17.500,000 ohms ½W
R18. 50,000 ohms ½W
R19. 250 ohms 3W
R20. 20,000 ohms ½ Watt
R21. 150,000 ohms ½W
R22. 100 ohms ½W
R23. 100 ohms ½Watt
R24. 7500 ohms ½W
R25..1000 ohms ½W
R26. 300 ohms ½W
R27. 100 ohms ½W
C1. 100mmfd
C2. 0.05mfd 400V

HIS MASTER'S VOICE 559 (Contd.)

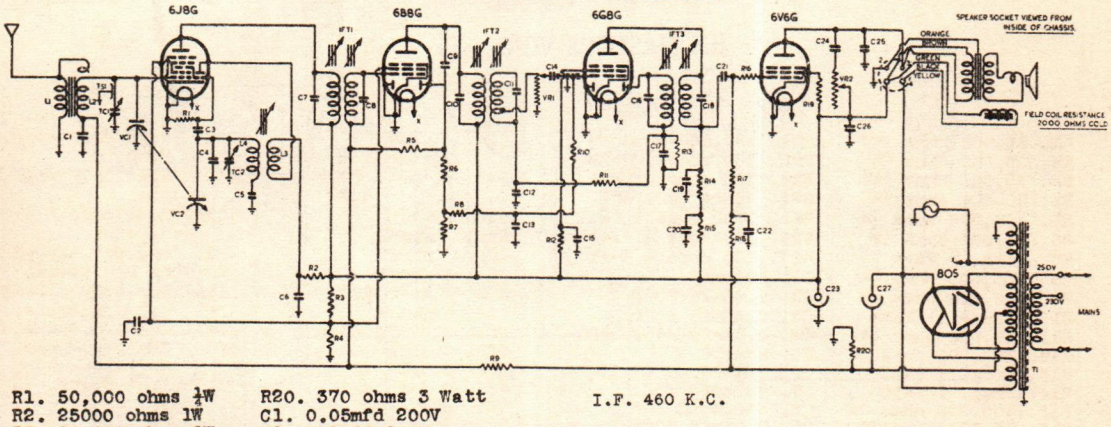
C3. 0.3mmfd neut.cond.
C4. 25mmfd
C5. 20mmfd
C6. 437mmfd
C7. 0.1mfd 400V
C8. 0.5mfd 400V
C9. 100mmfd
C10. 50mmfd
C11. 50mmfd
C12. 5000mmfd
C13. 0.05mfd 200V
C14. 0.1mfd 400V
C15. 50mmfd
C16. 100mmfd
C17. 100mmfd
C18. 100mmfd
C19. 0.1mfd 200V
C20. 100mmfd
C21. 0.02mfd 300V
C22. 0.1mfd 400V
C23. 0.1mfd 400V
C24. 0.5mfd 400V
C25. 0.02mfd 600V
C26. 5mfd 25V elec.con.
C27. 0.02mfd 600V
C28. 0.01mfd 600V
C29. 0.02mfd 300V
C30. 1.0mfd 200V
C31. 16mfd 550V elec.con.
C32. 16mfd 350V reg.type
C33. 0.05mfd 200V
VC1&VC2. 417mmfd 2 gang condenser
VR1. 1meg.pot.tapped
S2. Tone Mon.Switch
Dial lamp 6.3V 0.3 amp.
1FT1.1st I.F. Trans.
1FT2. 2nd I.F.Trans.
1FT3. 3rd I.F.Trans.
10" speaker
T1. Output transformer
T2. mains transformer
L1&L2. B/C aer.coil
L3&L4. B/C Osc.coil
TC1&TC2.Air trim.1.5-18mmfd
TS1. fixed trimmer shunt (7mmfd)

HIS MASTER'S VOICE 779 B/CAST, 889 DUAL WAVE AND 119 RADIOGRAM B/CAST

5-Valve A.C. Receivers

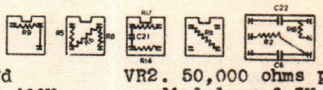
CONSUMPTION: 60 watts. WAVE-LENGTH RANGE: 13.9 to 44 metres, or 21.59 to 6.8 megacycles (Model 889 only). 200 to 550 metres, or 1500 to 545 kilocycles. MAX. UNDISTORTED POWER OUTPUT: 2.5 watts. LOUDSPEAKER: Models 779 and 889 use 6" cone speaker. Model 119 uses 8" cone speaker. DC resistance of field, cold - 2,000 ohms. DC resistance of voice coil 3.4 ohms. 400 cycle impedance of voice coil - 3.9 ohms.

HIS MASTER'S VOICE 779



R1. 50,000 ohms ½W
R2. 25000 ohms 1W
R3. 30,000 ohms 1W
R4. 150,000 ohms 1W
R5. 2meg. ½ Watt
R6. 1.25meg. ½Watt
R7. 0.5meg. ½ Watt
R8. 0.5meg. ½ Watt
R9. 10meg. 1 Watt
R10. 2meg. ½ Watt
R11. 100,000 ohms½W
R12. 1meg. 1 Watt
R13. 0.5meg. ½W
R14. 100,000 ohms ½W
R15. 15000 ohms ½W
R16. 100,000 ohms ½W
R17. 0.5meg. ½ Watt
R18. 250,000 ohms ½W
R19. 3000 ohms 1 Watt
R20. 370 ohms 3 Watt
C1. 0.05mfd 200V
C2. 0.1mfd 200V
C3. 25mmfd
C4. 20mmfd
C5. 400mmfd
C6. 0.1mfd 400V
C7. 50mmfd
C8. 100mmfd
C9. 50mmfd
C10. 100mmfd
C11. 100mmfd
C12. 250mmfd
C13. 0.1mfd 200V
C14. 0.01mfd 600V
C15. 0.1mfd 400V
C16. 100mmfd
C17. 250mmfd
C18. 100mmfd

I.F. 460 K.C.



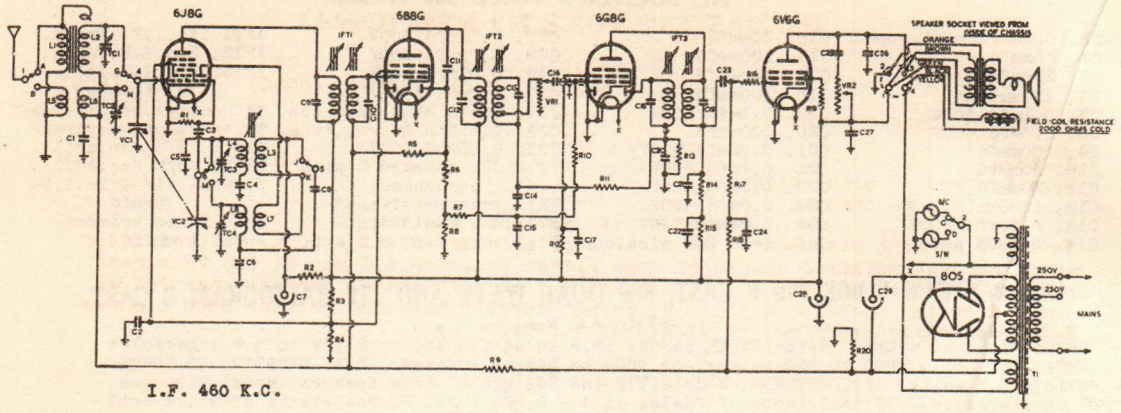
C19. 400mmfd
C20. 0.5mfd 400V
C21. 0.02mfd 600V
C22. 0.05mfd 200V
C23. 16mfd 500V WKG elec.cond.
C24. 0.05mfd 400V
C25. 0.002mfd 600V
C26. 0.5mfd 400V
C27. 8mfd 500V WKG elec.cond.
VC1&VC2. 380mmfd 2 gang cond.
VR1. 1meg. pot.
VR2. 50,000 ohms pot. dial lamp 6.3V .3 amp.
1FT1. 1st I.F. Trans.
1FT2. 2nd I.F. Trans.
1FT3. 3rd I.F. Trans.
6" speaker
T1. Mains Transformer
L1 & L2. B/C aerial coil
L3 & L4. B/C oscillator coil
TC1 & TC2. air trimmer 1.5-18mmfd
TS1 Fixed trimmer shunt 11.0mmfd

HIS MASTER'S VOICE 889

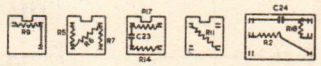
R1. 50,000 ohms ½W
R2. 25,000 ohms 1W
R3. 30,000 ohms 1W
R4. 150,000 ohms 1W
R5. 2 meg. ½ Watt
R6. 1.25meg. ½ Watt
R7. 0.5meg. ½ Watt
R8. 0.5meg. ½ Watt
R9. 10meg. 1 Watt
R10. 2meg. ½ Watt
R11. 100,000 ohms ½W
R12. 1meg. 1 Watt
R13. 0.5meg. ½ Watt
R14. 100,000 ohms ½W
R15. 15,000 ohms ½W
R16. 100,000 ohms ½W
R17. 0.5meg. ½ Watt
R18. 250,000 ohms ½W
R19. 3,000 ohms 1Watt
R20. 370 ohms 3 Watt
C1. 0.05mfd 200V
C2. 4.0mfd 100V WKG elec. cond.
C3. 25mmfd
C4. 400mmfd
C5. 20mmfd
C6. 5,400mmfd
C7. 4mfd 300V WKG elec. with C29
C8. 0.01mfd 600V
C9. 50mmfd
C10. 100mmfd
C11. 50mmfd
C12. 100mmfd
C13. 100mmfd
C14. 250mmfd
C15. 0.1mfd 200V
C16. 0.01mfd 600V
C17. 0.1mfd 400V
C18. 100mmfd
C19. 100mmfd
C20. 250mmfd
C21. 200mmfd
C22. 0.5mfd 400V
C23. 0.02mfd 600V
C24. 0.05mfd 200V
C25. 0.05mfd 400V
C26. 0.002mfd 600V
C27. 0.5mfd 400V
C28. 16mfd 500V WKG elec.
C29. 8mfd 500V WKG elec.with C7
VR1. 1meg. pot.
VC1 & VC2. 380mmfd 2 Gang condenser
VP2. 50,000 ohms pot. Dial lamp 6.3V .3 amp
1FT1. 1st I.F. Trans.
1FT2. 2nd I.F. Trans.
1FT3. 3rd I.F. Trans.
6" speaker
T1. Mains transformer
L1 & L2. B/C aer.coil
L3 & L4. B/C osc. coil
L5 & L6. S/W aer. coil
L7 & L8. S/W osc. coil
TC1,TC2,TC3 & TC4. air trimmer 1.5mmfd -18mmfd

For Voltage Table see foot of next page.

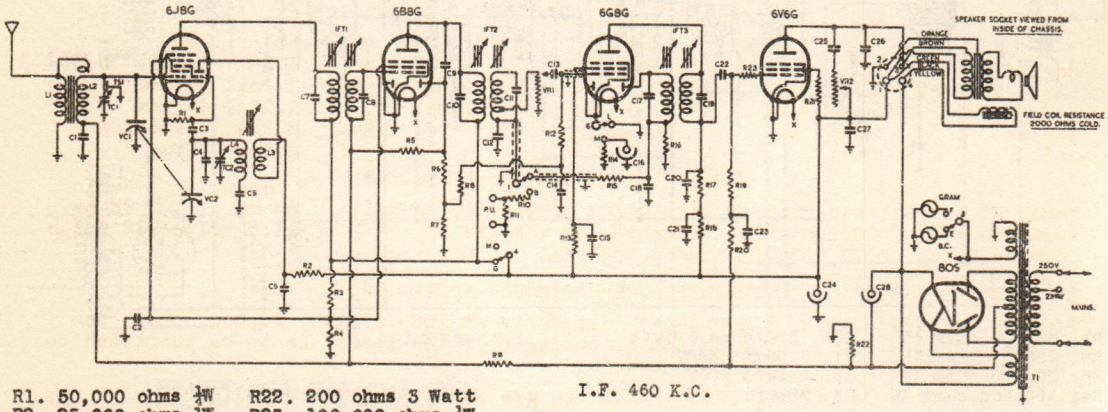
HIS MASTER'S VOICE 889 (Contd.)



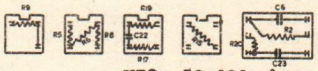
I.F. 460 K.C.



HIS MASTER'S VOICE 119



I.F. 460 K.C.



R1. 50,000 ohms ½W
R2. 25,000 ohms 1W
R3. 30,000 ohms 1W
R4. 150,000 ohms 1W
R5. 2meg. ¼ Watt
R6. 1.25meg. ¼ Watt
R7. 0.5meg. ¼ Watt
R8. 0.5meg. ¼ Watt
R9. 10 meg. 1 Watt
R10. 0.5meg. ¼ Watt
R11. 100,000 ohms ½W
R12. 2meg. ¼ Watt
R13. 1meg. 1 Watt
R14. 2,000 ohms ½W
R15. 100,000 ohms ½W
R16. 0.5meg. ¼ Watt
R17. 100,000 ohms ½W
R18. 15,000 ohms ½W
R19. 0.5meg. ¼ Watt
R20. 250,000 ohms ½W
R21. 3,000 ohms 1W
R22. 200 ohms 3 Watt
R23. 100,000 ohms ½W
C1. 0.05mfd 200V
C2. 0.1mfd 200V
C3. 25mmfd
C4. 20mmfd
C5. 400mmfd
C6. 0.1mfd 400V
C7. 50mmfd
C8. 100mmfd
C9. 50mmfd
C10. 100mmfd
C11. 100mmfd
C12. 250mmfd
C13. 0.01mfd 600V
C14. 0.1mfd 200V
C15. 0.1mfd 400V
C16. 10mfd 10V WKG elec.
C17. 100mmfd
C18. 250mmfd
C19. 100mmfd
C20. 400mmfd
C21. 0.5mfd 400V
C22. 0.02mfd 600V
C23. 0.05mfd 200V
C24. 16mfd 500V WKG elec. cond.
C25. 0.05mfd 400V
C26. 0.002mfd 600V
C27. 0.5mfd 400V
C28. 8mfd 500V WKG elec. cond.
VC1 & VC2. 380mmfd 2 gang condenser
VR1. 1 meg. pot.
VR2. 50,000 ohms potentiometer.
Dial lamp 6.3V .3 amp.
1FT1. 1st I.F. Transformer
1FT2. 2nd I.F. Transformer
1FT3. 3rd I.F. Transformer
8" speaker
T1. Mains Transformer
L1 & L2. B/C aerial coil
L3 & L4. B/C Osc. coil
TC1 & TC2. Air trimmers (1.5-18mmfd)
TS1. Fixed trimmer shunt (11.0mmfd)

VOLTAGE TABLE
(Models 779 and 889)

Values given may vary plus or minus 10% and are taken on 240 volt mains (250 volt primary tap). Receiver tuned to no signal point unless otherwise stated.

	V1 (6J8G) Amplr.	Sect.	Osc. Sect.	V2 (6B8G)	V3 (6G8G)	V4 (6V6G)	V5 (80S)
Plate to chassis volts	BC 268	-	140				
	SW 268	-	125	268	112	262	+

HIS MASTER'S VOICE 779 & 889 (Contd.)

	V1 (6J8G) Amplr.	V1 (6J8G) Sect.	Osc. Sect.	V2 (6B8G)	V3 (6G8G)	V4 (6V6G)	V5 (80S)
Screen to chassis volts	-	160x	-	160x			
	-	110	-	110	20	262	-
Heaters	-	-	6.3	6.3	6.3	6.3	5.0
Negative end of bias resis. to chassis	-	-	-	-	-	-	-

X Tuned to strong local station

Total HT current measured at terminal 4 of speaker socket - 50ma. V1 oscillator anode current measured at 25,000 ohms filter resistor 4.8 ma. V1 and V2 screen current measured at jumper on V1 socket 4.7 ma. V3 screen current measured at 1meg. dropping resistor 0.25ma. V4 screen current measured between 3000 ohm resistor and screen terminal of V4 socket 2.0 ma.

VOLTAGES AND CURRENTS (Model 119)

	V1 (6J8G) Amplr.Sec.	Osc. Sect.	V2 (6B8G)	V3 (6G8G)	V4 (6V6G)	V5 (80S)
Plate to chassis volts (Radio)	245	140	245	100	228	362 AC
" " " " (Gram)	0	145	0	107	240	365 AC
Screen " " (Radio)	100 / X145	-	100 / x145	20	230	-
" " " (Gram)	0	-	0	35	240	-
Heater volts	6.3	-	6.3	6.3	6.3	5.0
Plate current (Radio)	1.7ma	4.4ma	5.9ma	1.2ma	36.0ma	-
" " (Gram)	0	4.8ma	0	1.15ma	43.0ma	-
Screen " (Radio)	2.8ma	-	1.5ma	0.3ma	3.9ma	-
" " (Gram)	0	-	0	0.3ma	5.0ma	-

X Tuned to strong local station

	Gram.	Radio
Total HT current measured at terminal 4 of speaker socket	55 ma	58 ma
Negative end of 200 ohm bias resistor, to chassis	-11.5 volts	-12 volts
Cathode volts on V3 (6G8G) in gram.position	2.4V	-

SUPPLEMENTARY SERVICE INFORMATION FOR RADIOGRAM MODEL 119.

PICK-UP. DC resistance, 7,400 ohms. Impedance at 1000 cycles, 30,000 ohms. One of the pick-up leads, and also the screening over the leads, is to be connected to the BLACK pick-up socket on the chassis.

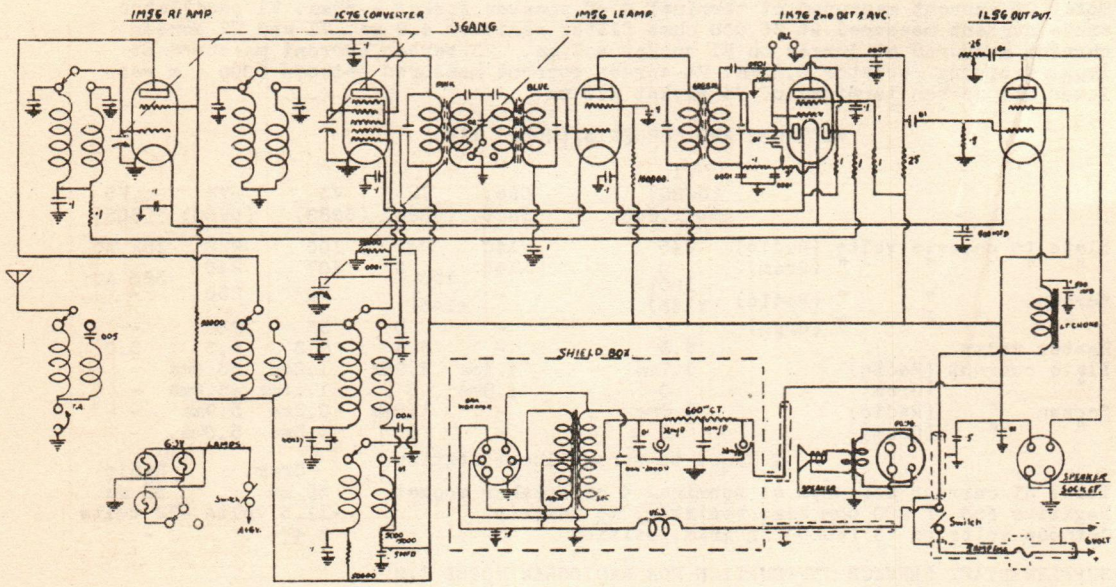
For information re THE AUTOMATIC BRAKE see His Master's Voice Model 429.

KRIESLER RADIO

Manufactured by Kriesler (Aust.) Pty. Ltd., Sydney, N.S.W.

KRIESLER 4K70, 4K71 AND 4K72

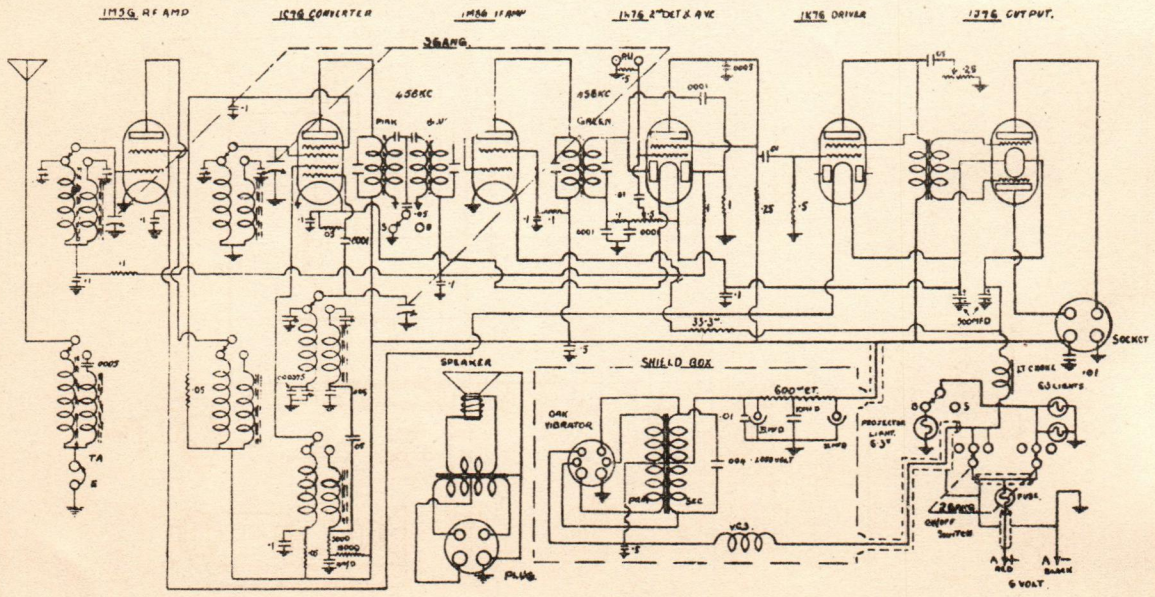
5-Valve D/W Vibrator



I.F. 458 K.C.

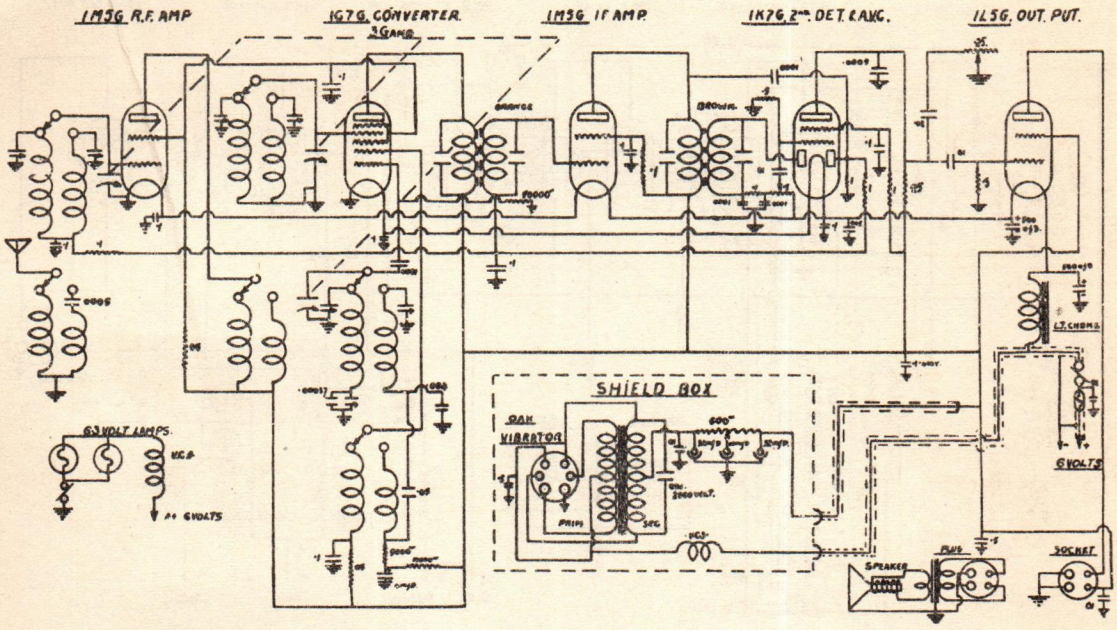
KRIESLER 4K80, 4K81 AND 4K82

6-Valve D/W Vibrator



KRIESLER 4K60 AND 4K40

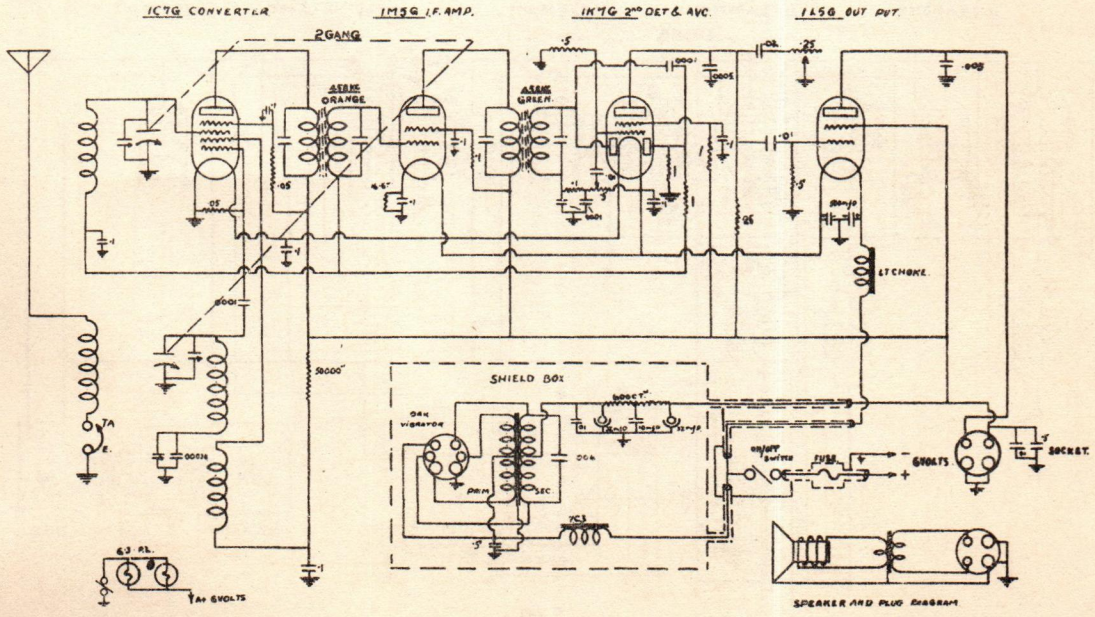
5-Valve D/W Vibrator



I.F. 458 K.C.

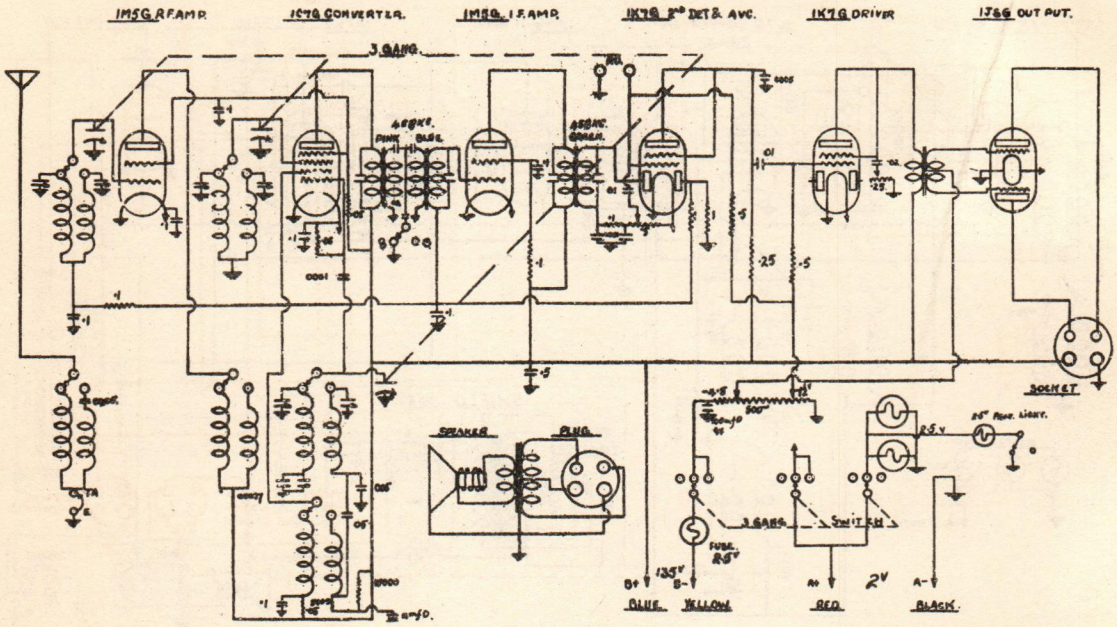
KRIESLER 4K35 AND 4K50

4-Valve B/C Vibrator



KRIESLER 4K30, 4K31 AND 4K32

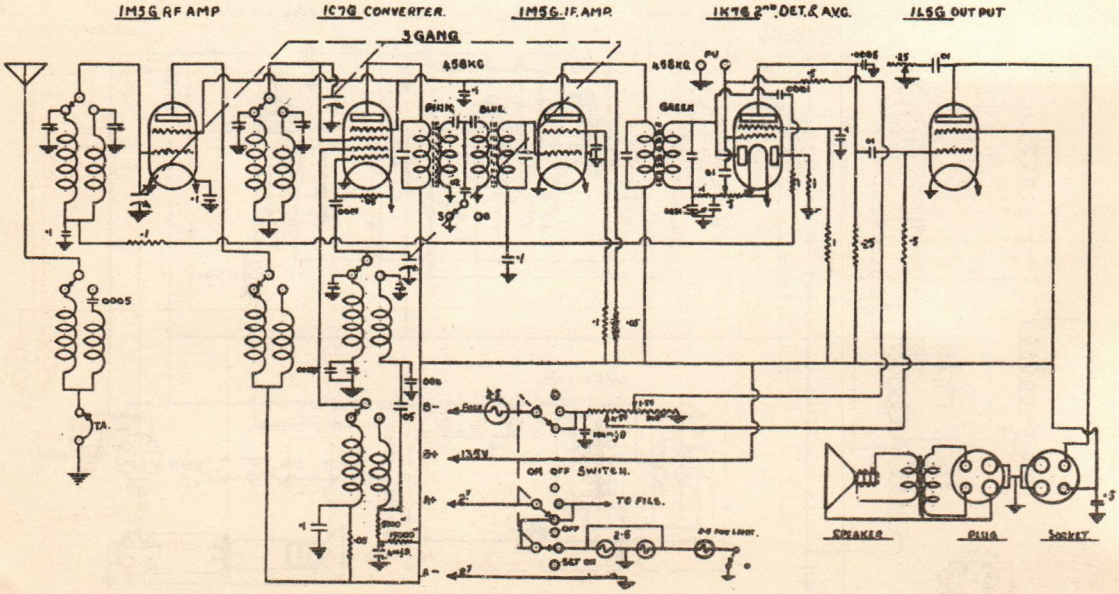
6-Valve D/W Battery



I.F. 458 K.C.

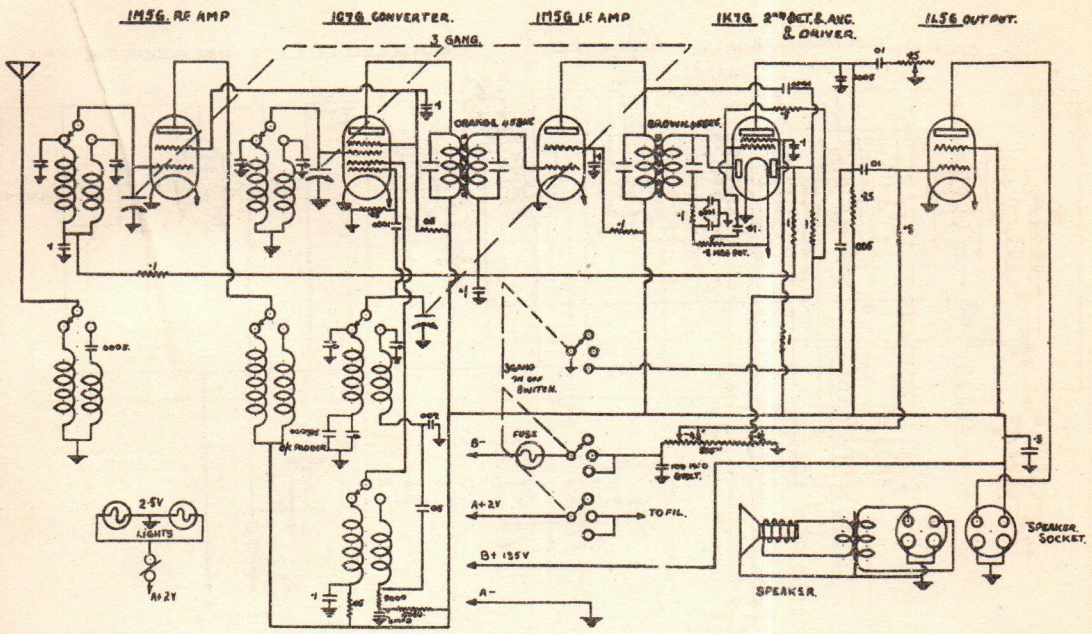
KRIESLER 4K20, 4K21 AND 4K22

5-Valve D/W Battery



KRIESLER 4K00 AND 4K10

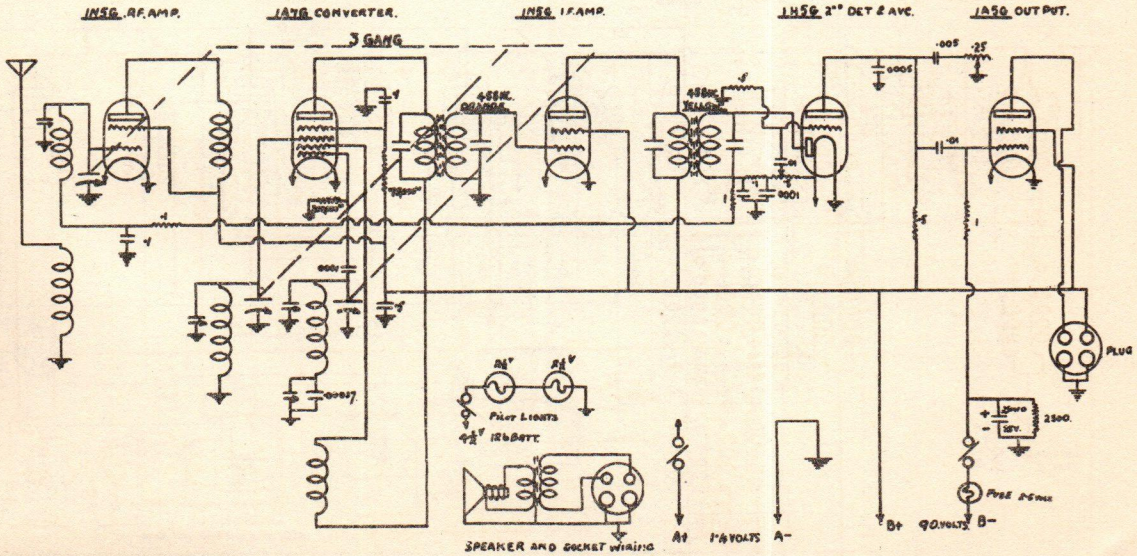
5-Valve D/W Battery



I.F. 458 K.C.

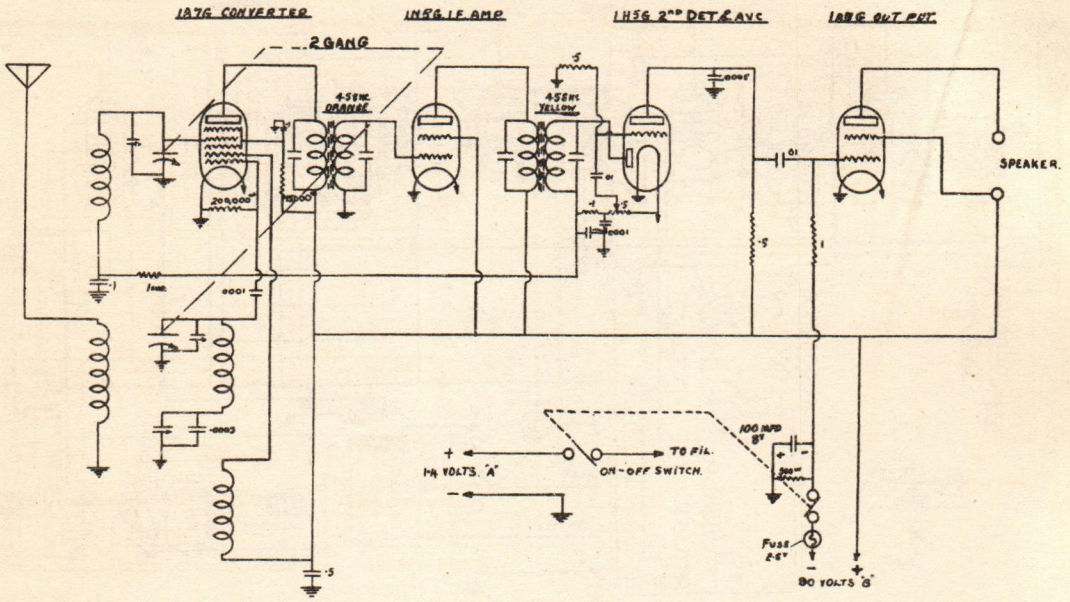
KRIESLER 3K97 AND 4K05

5-Valve B/C Battery



KRIESLER 3K95

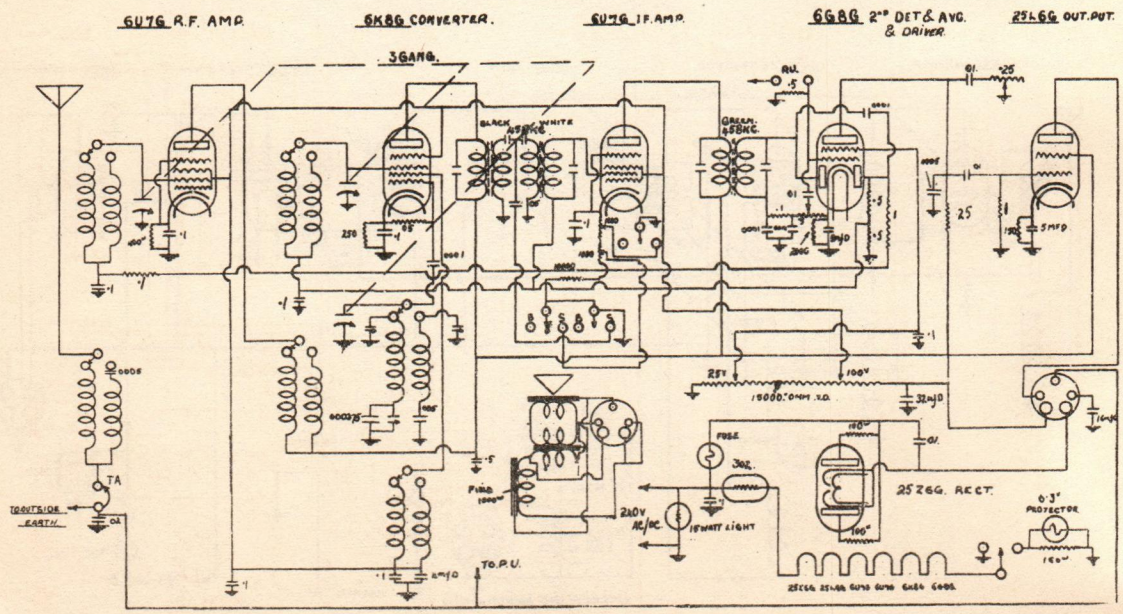
4-Valve Battery B/C Compact



I.F. 458 K.C.

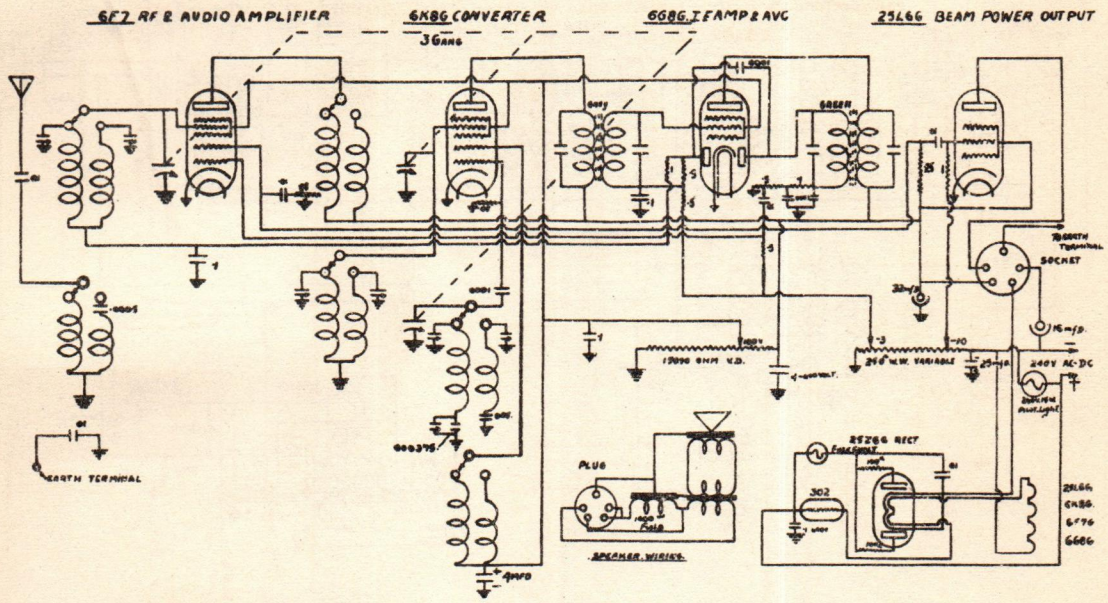
KRIESLER 3K90, 3K91 AND 3K92

6-Valve A.C./D.C. D/W



KRIESLER 3K75 AND 3K80

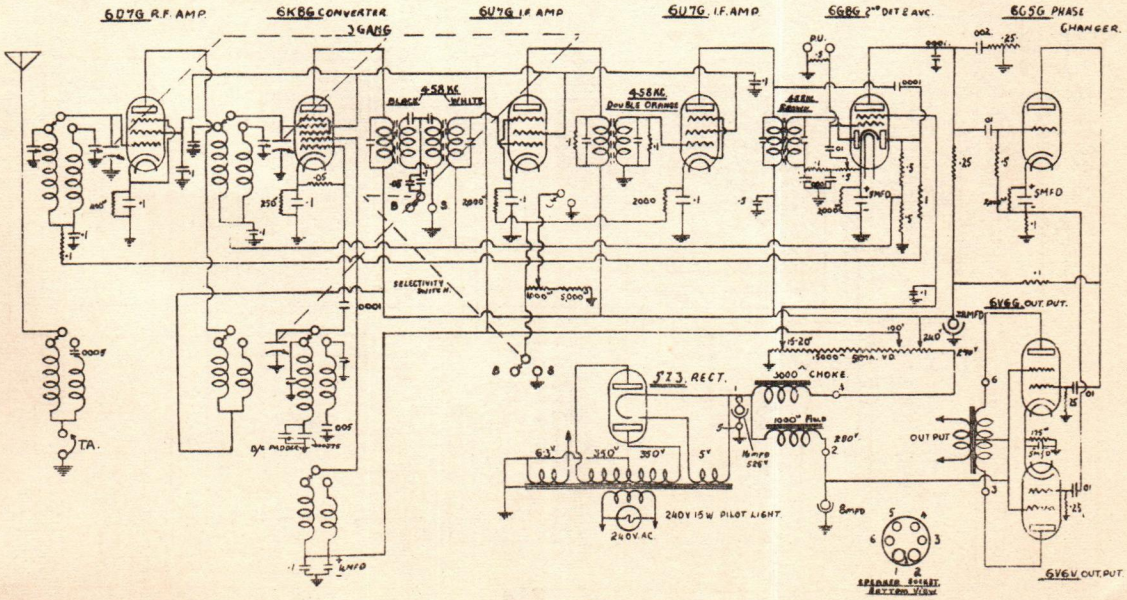
5-Valve D/W A.C./D.C.



I.F. 458 K.C.

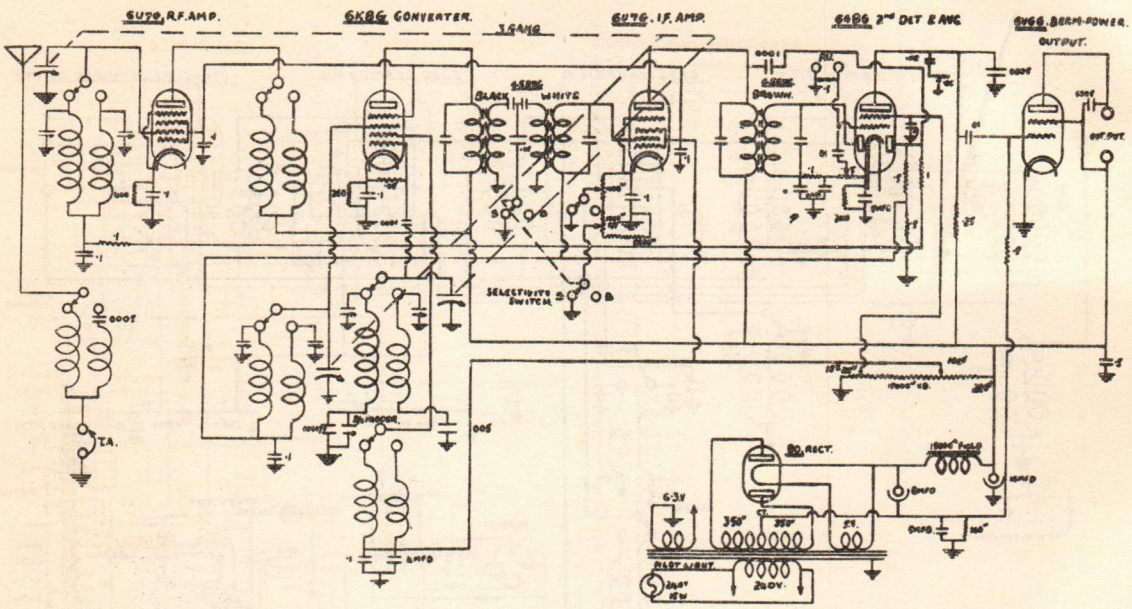
KRIESLER 3K70

9-Valve A/C D/W



KRIESLER 3K40

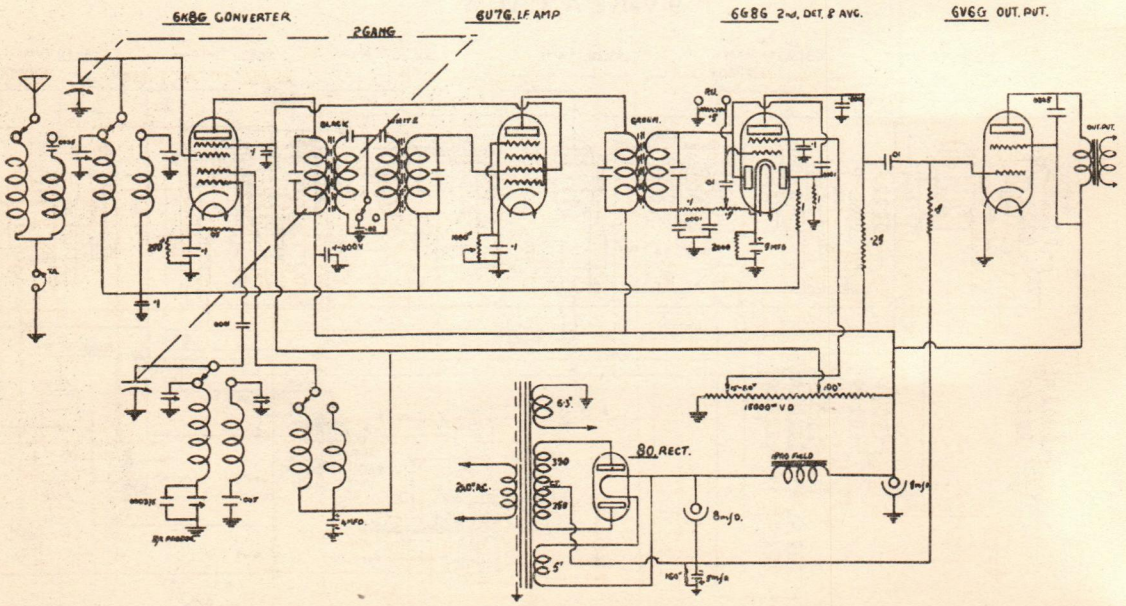
6-Valve A/C D/W



I.F. 458 K.C.

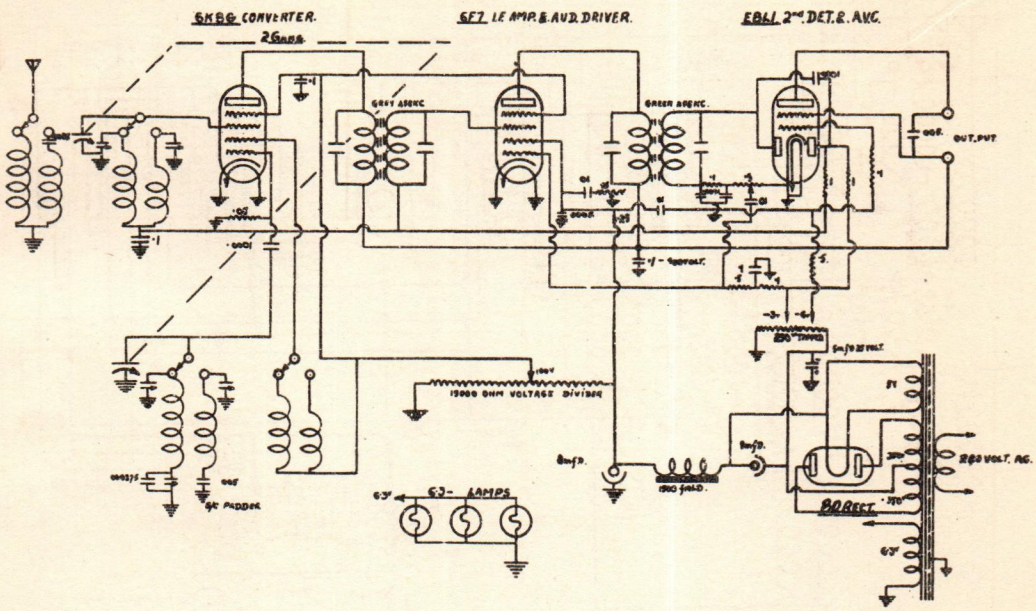
KRIESLER 3K30, 3K31 AND 3K32

5-Valve A/C D/W



KRIESLER 3K20

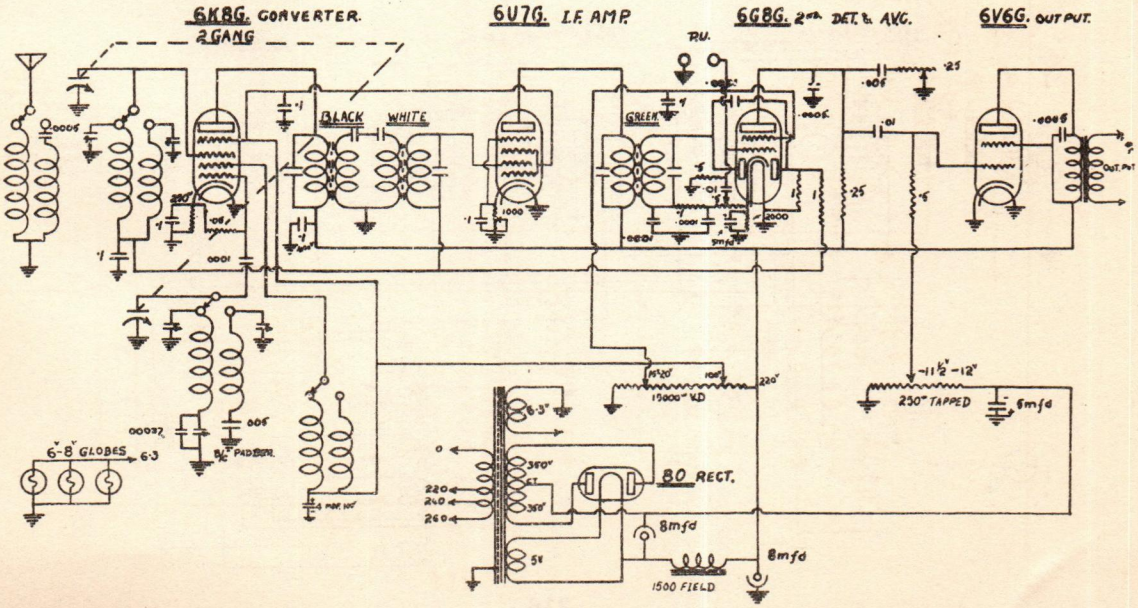
4-Valve A/C D/W



I.F. 458 K.C.

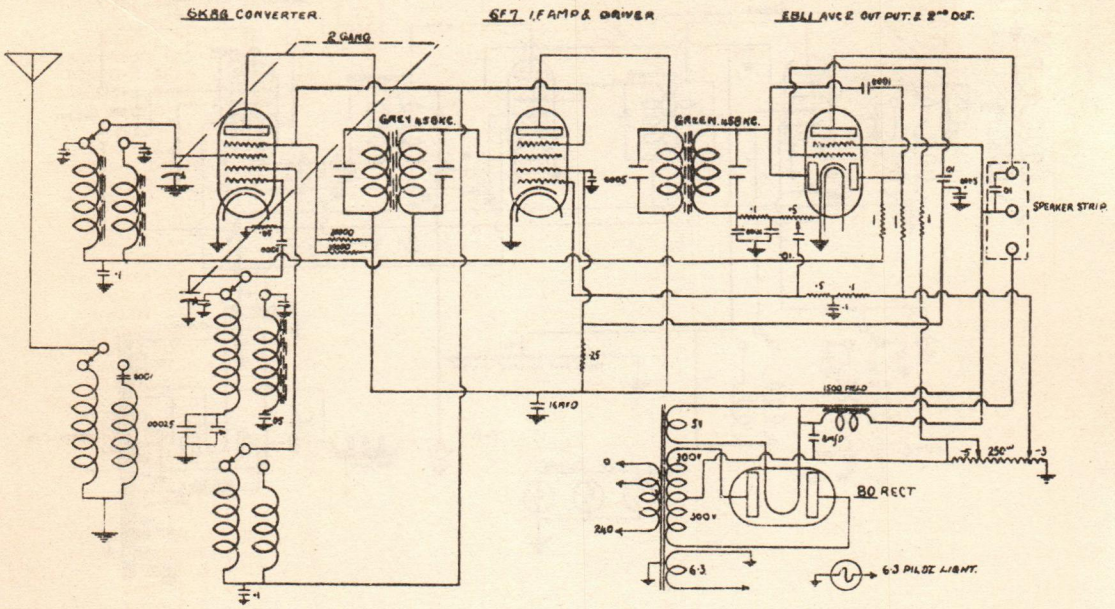
KRIESLER 3K15 AND 3K25

5-Valve D/W A/C



KRIESLER 3K04

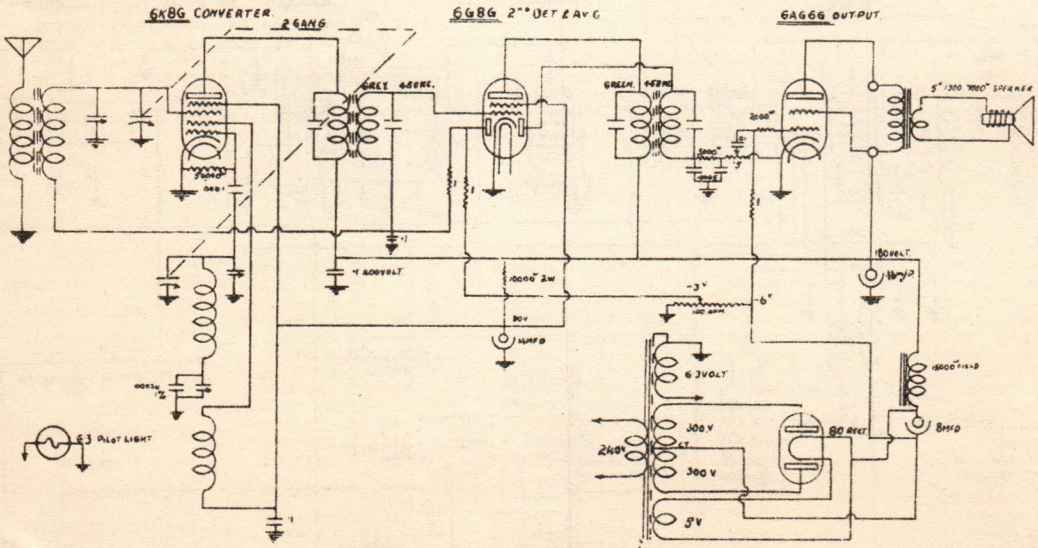
4-Valve A/C D/W Compact



I.F. 458 K.C.

KRIESLER 3K00

Mantel 4-Valve A/C B/C

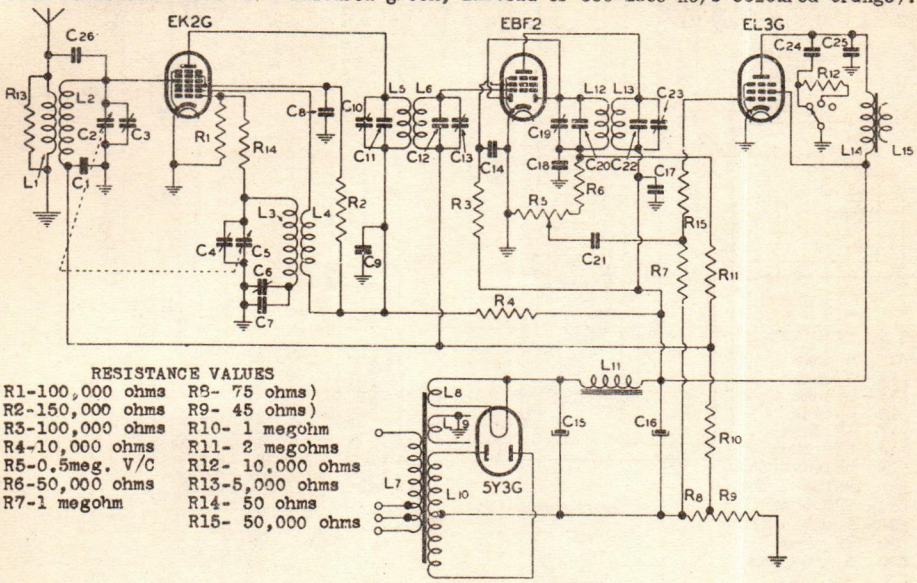


MULLARD RADIO

Manufactured by Mullard (Aust.) Pty. Ltd., Sydney

MULLARD 43-43A

NOTE: Late production of this model (designated 43A) has different gang condenser, and different dial scale (550-1600 KC/s coloured green, instead of 550-1500 KC/s coloured orange).



Capacity Values

C1-0.1mfd
C2)
C3 - Gang
C5) Condenser
C4-2.5-30mfd
C6-2.5-30mmfd
C7-330mmfd
C8-0.1mfd
C9-0.01mfd
C10-2.5-30mmfd
C11-80mmfd
C12)-Part of
C13)-1st I.F.T.
C14-0.01mfd
C15-8mfd elec.
C16-16mfd elec.
C17-0.01mfd
C18-100mmfd
C19)-Part of
C20) 2nd I.F.T.
C21-0.004mfd
C22-80mmfd
C23-2.5-30mmfd
C24-0.02mfd
C25-0.004mfd
C26-4mmfd

RESISTANCE VALUES

R1-100,000 ohms
R2-150,000 ohms
R3-100,000 ohms
R4-10,000 ohms
R5-0.5meg. V/C
R6-50,000 ohms
R7-1 megohm
R8- 75 ohms)
R9- 45 ohms)
R10- 1 megohm
R11- 2 megohms
R12- 10,000 ohms
R13-5,000 ohms
R14- 50 ohms
R15- 50,000 ohms

VALVE ELECTRODE VOLTAGES

VALVE TYPE	PLATE VOLTS	SCREEN VOLTS	GRID VOLTS
EK2G	190	50	2.0 (across R9)
	(Osc. anode 190V)		
EBF2	230	80	2.0 (across R9)
EL3G	210	230	5.0 (across R8 - R9).
5Y3G	300 (A.C., each plate)		

All voltages measured to chassis with 1,000 O.P.V. voltmeter, volume control off, no signal, rated A.C. line voltage.

RESIS. OF WINDINGS.

L1 - 30 ohms
L2 - 4 ohms
L3 - 2.5 ohms
L4 - 3.5 ohms
L5 - 8 ohms
L6 - 8 ohms
L7 - 60 ohms
L8 - below 1 ohm
L9 - below 1 ohm
L10- 600 ohms
L11- 1500 ohms
L12- 8 ohms
L13- 8 ohms
L14- 600 ohms
L15- below 1 ohm

REMOVAL OF CHASSIS: Chassis, speaker dial (except glass scale) and baffle-board are constructed as a single unit. After removing control knobs (grub screws of side knobs accessible from inside cabinet), and the fibre back,place receiver on a cloth face downward. Remove the two uppermost screws beside dial lamps,two at bottom of baffle-board (beneath chassis) and two at each side (extreme edge of baffle-board). Withdraw chassis vertically by the side-brackets,taking care to clear the two projecting brackets at the bottom rear of the cabinet. Remove dial scale glass before moving cabinet. When replacing screws,use a magnetised screwdriver.

INTERMEDIATE FREQUENCY: 472.5 KC/s. Re-alignment should ordinarily be unnecessary,and is not recommended unless a high-grade accurately calibrated signal generator is available.

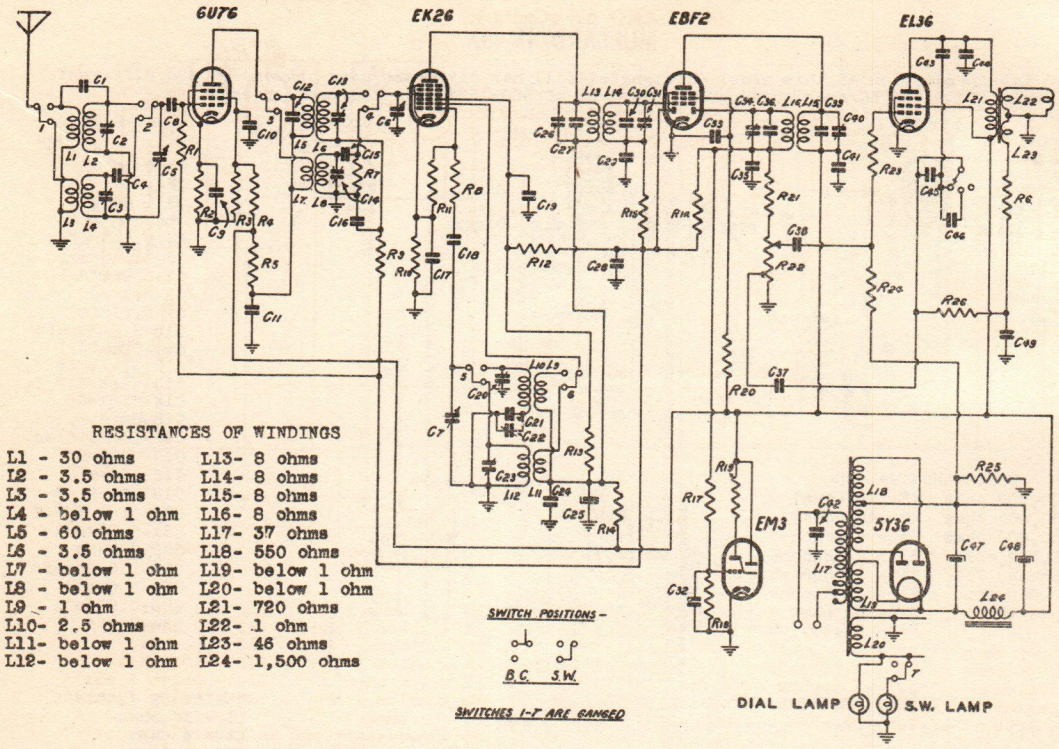
MULLARD 61

CAPACITY VALUES.

C1 - 8mmfd
C2 - 0-30mmfd
C3 - 0-30mmfd
C4 - 0.0045mmfd
C5 - Gang condenser
C6 - Gang condenser
C7 - Gang condenser
C8 - 100mmfd
C9 - 0.01mfd
C10- 0.01mfd
C11- 0.01mfd
C12- 80mmfd
C13- 0-30mmfd
C14- 0-30mmfd
C15- 0.0045mfd
C16- 0.05mfd
C17- 0.01mfd
C18- 100mmfd
C19- 0.01mfd
C20- 0-30mmfd
C21- 330mmfd
C22- 0-30mmfd
C23- 0-30mmfd
C24- 0.01mfd
C25- 8mfd elect.
C26- 0-30mmfd
C27- 80mmfd
C28- 0.05mfd
C29- 0.01mfd
C30- 80mmfd
C31- 0-30mmfd
C32- 0.05mfd
C33- 0.01mfd
C34- 0-30mmfd
C35- 100mmfd
C36- 80mmfd
C37- 0.03mfd
C38- 0.004mfd
C39- 80mmfd
C40- 0-30mmfd
C41- 0.01mfd
C42- 0.005mfd
C43- 0.001mfd
C44- 0.002mfd
C45- 100mmfd
C46- 400mmfd
C47- 8mfd elect.
C48- 16mfd elect.
C49- 0.03mfd

RESISTANCE VALUES.

R1 - 1 megohm
R2 - 150 ohms
R3 - 30,000 ohms
R4 - 25,000 ohms
R5 - 1,000 ohms
R6 - 1,500 ohms
R7 - 0.5 megohm
R8 - 50 ohms
R9 - 2 megohms
R10- 500 ohms
R11- 50,000 ohms
R12- 5 megohms
R13- 150,000 ohms
R14- 5,000 ohms
R15- 2 megohms
R16- 2 megohms
R17- 5 megohms
R18- 2 megohms
R19- 1 megohm
R20- 100,000 ohms
R21- 50,000 ohms
R22- 0.5 meg. V/C tapped at 35,000 ohms.
R23- 50,000 ohms
R24- 1 megohm
R25- 100 ohms
R26- 10,000 ohms



RESISTANCES OF WINDINGS

L1 - 30 ohms	L13- 8 ohms
L2 - 3.5 ohms	L14- 8 ohms
L3 - 3.5 ohms	L15- 8 ohms
L4 - below 1 ohm	L16- 8 ohms
L5 - 60 ohms	L17- 37 ohms
L6 - 3.5 ohms	L18- 550 ohms
L7 - below 1 ohm	L19- below 1 ohm
L8 - below 1 ohm	L20- below 1 ohm
L9 - 1 ohm	L21- 720 ohms
L10- 2.5 ohms	L22- 1 ohm
L11- below 1 ohm	L23- 46 ohms
L12- below 1 ohm	L24- 1,500 ohms

VALVE ELECTRODE VOLTAGES

VALVE TYPE	PLATE VOLTS	SCREEN VOLTS	GRID VOLTS
6U7G	210	80	1.5 (across R2)
EK2G	190	45	2.0 (across R10)
	(Osc.anode 190V)		
EBF2	220	70	0
EL3G	195	220	5.5 (across R25)
5Y3G	300 (A.C., each plate)		

All voltages measured to chassis with 1,000 O.P.V. voltmeter, volume control off, no signal, rated A.C. line voltage.

REMOVAL OF CHASSIS: Chassis,speaker,dial and baffle-board are constructed as a single unit. After removing control knobs and fibre back,remove the two screws at extreme top of baffle-board (above dial), two at bottom (beneath the chassis), and four at each side (extreme edge). A magnetised screwdriver facilitates replacement of these screws.

INTERMEDIATE FREQUENCY: 472.5 KC/s. Re-alignment should usually be unnecessary and in general is not recommended. It must not be attempted without a signal generator attenuating to 1 microvolt or less. On short waves the oscillator operates at a frequency lower than the signal; care must be taken to avoid alignment for the wrong image tuning point. Proper dummy aerials must be used for both short-wave and broadcast bands.

MULLARD 62

NOTE: This Model operates either from a 2 volt "A" Battery and 135 volt "B", or, in conjunction with Model 62 Vibrator-Converter,from a single 6 volt battery. In the latter case the battery cable is discarded and the Vibrator-Converter substituted,the Receiver dial lamp at the same time being changed from 2 volt to 6 volt. Instruction sheet is packed with the Vibrator-Converter.

VALVE ELECTRODE VOLTAGES

VALVE TYPE	PLATE VOLTS	SCREEN VOLTS	GRID VOLTS
KK2	120	55	0
	(Osc.anode 120V.)		
KF3	130	130	0
1F7G	30	20	0
KL4	125	130	5.0 (Across R10)

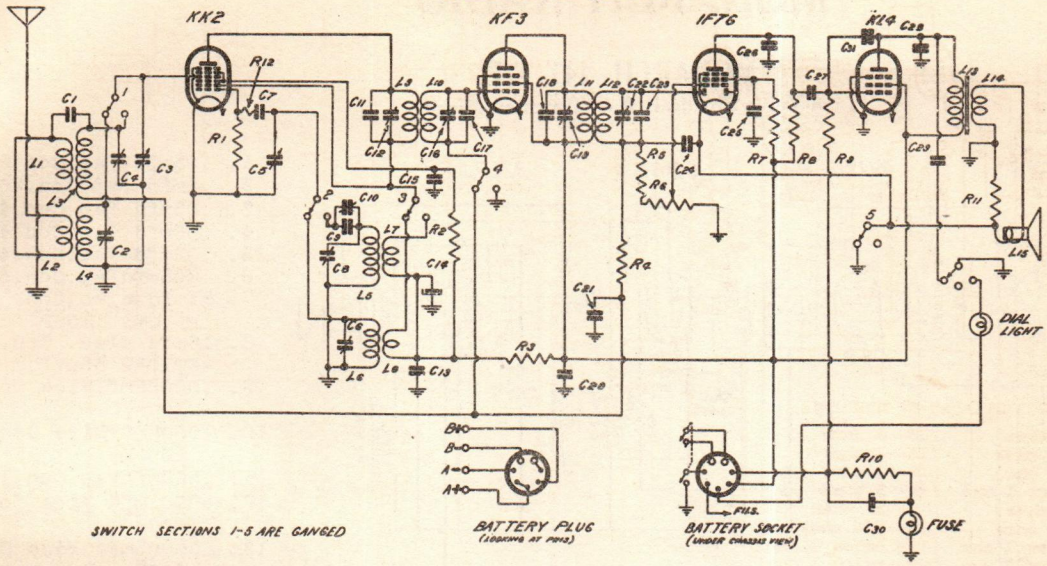
All voltages measured to chassis with 1,000 O.P.V. voltmeter, volume control off, no signal, rated battery voltages.

BATTERY CONSUMPTION: "A" - 0.4A (lamp of)
"B" - 14 mA (approx.)
With Vibrator-Converter - 1.2A at 6V.

CAPACITY VALUES.

C1 - 4mmfd	C15- 0.01mfd
C2 - 2.5-30mmfd	C16- 2.5-30mmfd
C3 - Gang Cond.	C17&C18-80mmfd
C5 - Gang Cond.	C19- 2.5-30mmfd
C4 - 2.5-30mmfd	C20- 0.1mfd
C6 - 2.5-30mmfd	C21- 0.01mfd
C7 - 35mmfd	C22- 2.5-30mmfd
C8 - 2.5-30mmfd	C23- 80mmfd
C9 - 380mmfd	C24- 100mmfd
C10- 2.5-30mmfd	C25- 0.05mfd
C11- 80mmfd	C26- 100mmfd
C12- 2.5-30mmfd	C27- 0.01mfd
C13- 0.01mfd	C28- 0.002mfd
C14- 32mfd	C29- 0.01mfd
	C30- 25mfd
	C31- 10mmfd

MULLARD 62 (Contd.)

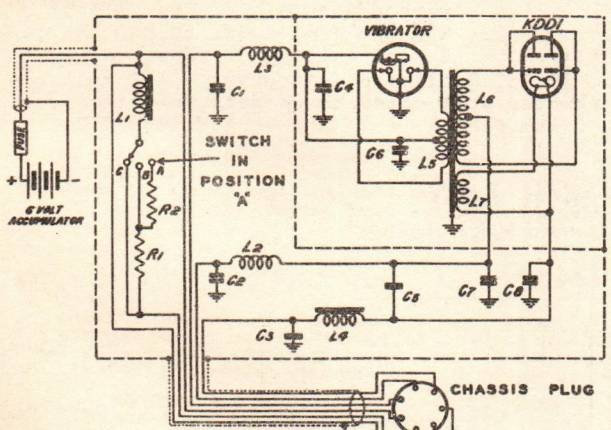


RESISTANCE VALUES.

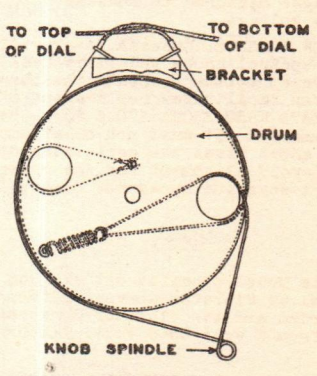
R1 - 50,000 ohms	R6 - 0.5meg. V/C with switch	R11- 0.275 ohm (mounted on speaker)	L3 - 4 ohms	L4 - below 1 ohm	L10 - 8 ohms
R2 - 50,000 ohms	R7 - 1 megohm	RESISTANCES OF WINDINGS.	L5 - 2 ohms	L6 - below 1 ohm	L11 - 8 ohms
R3 - 1,000 ohms	R8 - 0.25 megohm	L1 - 30 ohms	L7 - 3.5 ohms	L8 - below 1 ohm	L12 - 8 ohms
R4 - 2 megohms	R9 - 1 megohm	L2 - below 1 ohm	L9 - 8 ohms		L13 - 600 ohms
R5 - 50,000 ohms	R10- 400 ohms				L14 - below 1 ohm
	R12- 25 ohms				L15 - below 1 ohm

INTERMEDIATE FREQ.: 472.5 KC/s. Re-alignment should usually be unnecessary and in general is not recommended. It must not be attempted without a signal generator attenuating to 1 microvolt or less. On short waves to the osc. operates at a frequency lower than the signal; care must be taken to avoid alignment for the wrong image tuning point. Proper dummy aerials must be used for both short-wave and broadcast bands.

VIBRATOR-CONVERTER—MODEL 62



DIAL PARTS DIAGRAM



REMOVAL OF CHASSIS: Chassis,speaker,dial and baffle-board are constructed as a single unit. After removing control knobs and fibre back,remove the two screws at extreme top of baffle-board (above dial) two at bottom (beneath the chassis),and four at each side (extreme edge). A magnetised screwdriver facilitates replacement of these screws.

DIAL ADJUSTMENT: If re-threading dial cords,follow diagram in exact detail. To increase tension on metallic cords,slacken brass locknuts at top and bottom ends of flexible tubing (where metallic cord emerges) and turn both threaded nipples anti-clockwise SLIGHTLY, then re-tighten locknuts. To raise pointer slightly to correct calibration,proceed as above but turn top adjusting nipple anti-clockwise and bottom nipple clockwise. Reverse above directions of rotation to decrease tension or to lower pointer, respectively.

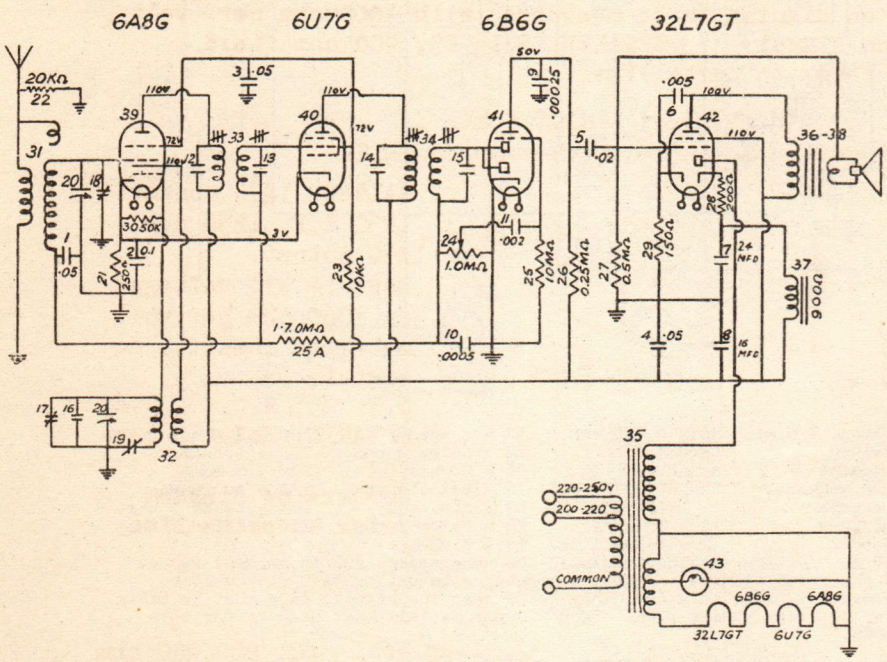
CAPACITY VALUES.

C1 - 1mfd 200V	C5 - 8mfd 500V	RESISTANCE VALUES.	
C2 - 1mfd 200V	C6 - 0.05mfd 200V	R1 - 2.6 ohms	L1 - 6 ohms
C3 - 32mfd 350V	C7 - 0.05mfd 200V	R2 - 1.5 ohms	L4 - 250 ohms
C4 - 1mfd 200V	C8 - 0.05mfd 400V		

MONARCH RADIO

MONARCH 441 B.P.

4-Valve Broadcast A.C. Operated Midget

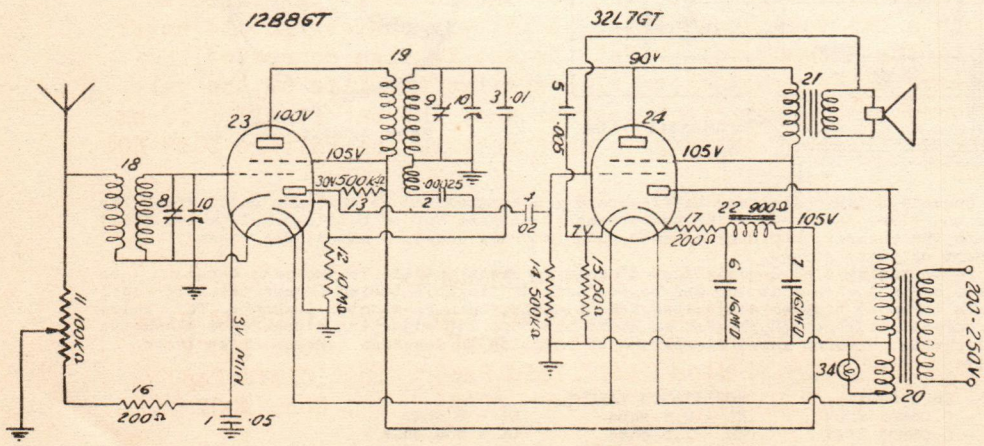


1. .05mfd.Pap.Con.200V
2. .1mfd Pap.Con.200V
3. .05mfd Pap.Con.400V
4. .05mfd Pap.Con.400V
5. .02mfd Pap.Con.400V
6. .005mfdPap.Con.600V
7. 24mfd elec.Con. ET1043 350VP
8. 16mfd Elec. Con. ET1049 350VP
9. .00025mf Mica Con. 1000V
10. .0005mf Mica Con. 1000V
11. .002mf Pap.Con.1000V
12. .0001mfd Mica Con. 1000V
13. .00005mfd Mica Con. 1000V
14. .0001mfd. Mica Con. 1000V
15. .0001mfd Mica Con. 1000V
16. 25mmf W/W Con.
21. 250 ohm Carbon Res. ½ Watt
22. 20,000 ohm Carbon Res. ½ Watt
23. 10,000 ohm Carbon Res. ½W
24. 1meg. Volume Control
25. 10meg. Carbon Res. 1 Watt
26. 250,000 ohm Carbon Res. ¼Watt
27. 500,000 ohm Carbon Res. ½W
28. 200 ohm W/W Res. 3 Watt
29. 150 ohm Carbon Res. ½ Watt
30. 50,000 ohm Carbon Res. ½W

VALVES: 6A8G Converter. 6U7G I.F. 6B6G det. 32L7GT Rectifier and output. All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal. Numbers refer to parts list. Speaker: 900 ohm field. I.F. 455 K.C. Frequency coverage 1650K.C. to 540 K.C.

MONARCH BABY

2-Valve A.C. Operated Midget Receiver



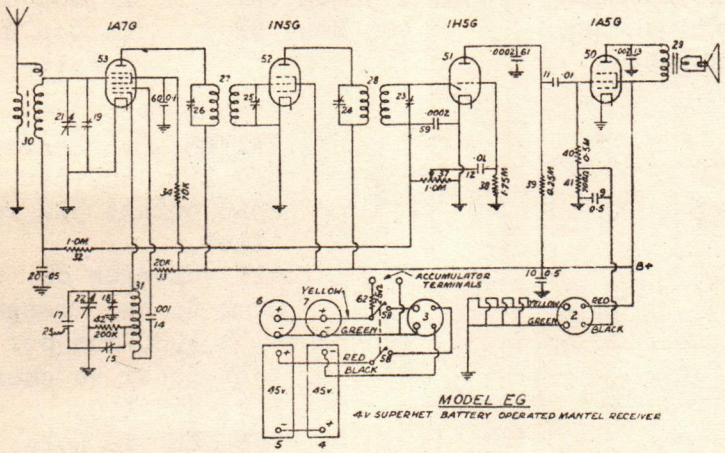
1. .05mf Pap.Con. 200V.
2. .00025mfd Mica Con. 1000V
3. .01mfd Pap.Con. 400V
4. .02mfd Pap.Con. 400V.
5. .005mfd Pap.Con. 600V
6. 16mfd elec.Con. Type EEC916 350VP
7. 16mfd elec.Con. Type ET1043 350VP
11. 100,000 ohm Vol. Control

12. 10meg. Res.1W 14. 500,000 ohm Res. ½W 15. 150 ohmRes.½W 17.200ohm W/W
13. 500,000 ohm Res.½W 16. 200 ohmRes.½W Res. 3W

VALVES: 12B8GT R.F. and det. - 32L7GT output and rectifier.
All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal. SPEAKER: Rola K5, 900 ohm field.
Numbers on diagram refer to parts list.

MONARCH MIDGET EC

4-Valve Broadcast Battery Operated, Model EG



VALVES: 1A7G converter 1N5G I.F. 1H5G det. 1A5G output.
Measure all voltages on 1000 ohm per volt meter to chassis, no signal.
I.F. 455 K.C.
SPEAKER: Rola 56 permag.
Numbers on diagram refer to parts list.

9. .5mfd Pap.Con. 200V
10..5mfd Pap.Con. 200V
11. .01mfd Pap.Con 400V
12..01mfd Pap.Con. 400V
13..002mfd Pap. Con.400V
14. .001mfd Mica Con.1000V
17. 25mmfd W/W Con. 1000V
20. .05mfd Pap. Con.200V
32. 1meg.Res.¼W
33. 20,000 ohmRes.¼W
34. 70,000 ohm Res. ¼W
37. 1meg.Vol. Control
38. 1.75 meg. Res.¼W
39. 250,000 ohmRes.¼W
40. 500,000 ohmRes.¼W
41. 700 ohm Res. ¼W
42. 200,000 ohm Res. ¼W
59. .0002mfd Mica Con.1000V
60. .1mfd Pap. Con. 200V
61. .0002mfd Mica Con.1000V
62. 2.5 ohms W/W Res. 2 Watt

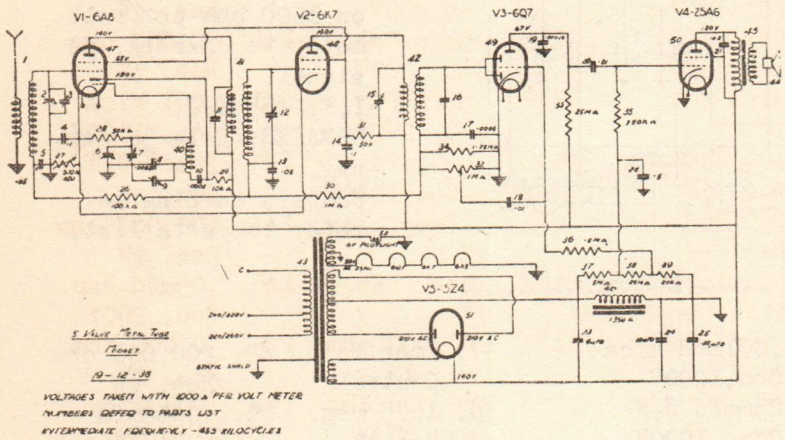
CAUTION: If an accumulator is used. The set should never be connected to any other but a two volt accumulator. A battery charger should never be connected. to the accumulator whilst the set is also connected. Failure to observe these precautions will shorten the life of the valves, and consequently the efficient operation of the set itself. If external air cell or filament battery is used be sure the voltage DOES NOT EXCEED 1½ volts.

MONARCH MIDGET EC

5-Valve Broadcast A.C. Operated, Model E.C.

4. .1mf Pap.Con. 400V
5. .05mf Pap. Con. 200V
8. .0003mfd Mica Con. 1000V
10..0005mfd Mica Con. 1000V
13. .05mfd Pap. Con. 200V
14. .1mfd Pap. Cor 400V
17. .0005mfd Mica Con. 1000V
18. .01mfd Pap. Con. 400V

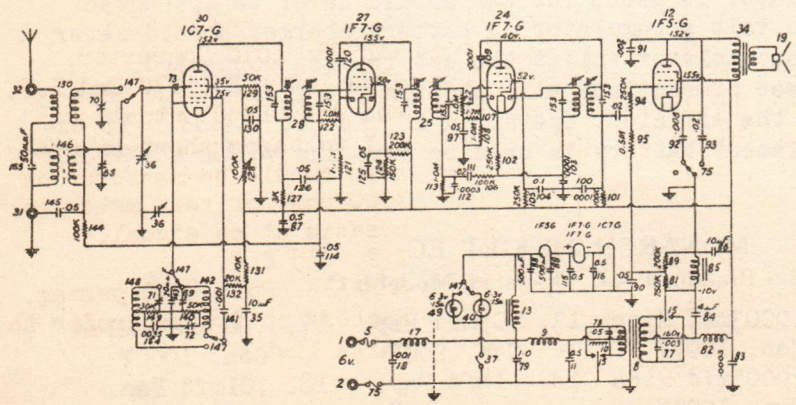
19. .00025mfd Mica Con. 1000V
20. .01mfd Pap. Con. 400V
21. .02mfd Pap. Con. 400V
22. .5mfd Pap. Con. 200V
23. 4mfd Elec. Con. 300V
24. 10mfd Elec. Con. 300V
2 .25mfd Pap.Con. 400V
26. 100,000 ohm Res. ¼ Watt
27. 500 ohm Adj. W.W. Resistor
28. 50,000 ohm Carbon Res. ¼ Watt
29. 10,000 ohm Carbon Res. ¼ Watt
30. 1meg. Carbon Res. ¼W
31. 30,000 ohm Car.Res. ¼W
32. 1meg.Centralab Volume Control
33. .25meg. Carbon Res. ¼W
34. 1.75meg.Carbon Res. ¼W
35. 250,000 ohm Carbon Res. ¼ Watt
36. .5meg. Carbon Res. ¼W
37. .5meg. Carbon Res. ¼W
38. .25meg. Carbon Res. ¼W
39. 20,000 ohm Carbon Res. ¼ Watt



VALVES: 6A8 converter 6K7 I.F. 6Q7 det. 25A6 output 5Z4 rectifier.
All voltages on diagram to be measured with 1000 ohm per volt meter to chassis.
I.F. 455 K.C.
SPEAKER: F4 Rola. 1350 ohm field.
Numbers on diagram refer to parts list.

MONARCH 948 FH

4-Valve Dual Wave Vibrator Receiver with Presto Tuning



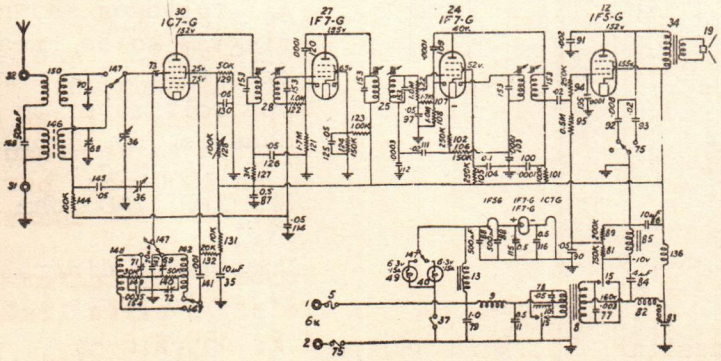
VALVES: 1C7G Converter. 1F7G I.F. 1F7G 2nd I.F. and det. 1F5G output.
All voltages shown on diagram to be measured on 1000 ohm per volt meter to chassis at no signal.
Numbers on diagram refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola 66 Permag.

18. .001mfd Mica Con. 1000V
22. Volume Cont. 1meg. Logarithmic
35. 10mfd. Dry elec. Con. 300V
77. .003mfd Mica Con. 2000V
78. .05mfd Pap. Con. 400V
79. 1mfd Pap. Con. 200V
81. 750,000 ohm Res. ¼W
83. .0003mfd Mica Con. 1000V
84. 4mfd. Elec. Con. 300V
85. 500 ohm Filter Choke
86. 10mfd Elec. Con. 200V
87. .5mfd Pap. Con. 400V
88. Twin 500mfd Elec. Con. 6V
89. 200,000 ohm Res. ¼W
90. .05mfd Pap. Con. 200V
91. .002mfd Pap. Con. 600V
92. .008mfd Pap. Con. 600V
93. .02mfd Pap. Con. 600V
94. 250,000 ohm Res. ¼W
95. 500,000 ohm Res. ¼W
96. .02mfd Pap. Con. 400V
97. .05mfd Pap. Con. 400V
100. .0001mfd Mica Con. 1000V
101. 100,000 ohm Res. ¼W
102. 250,000 ohm Res. ¼W
103. .0001mfd Mica Con. 1000V
104. .1mfd Pap. Con. 400V
105. 250,000 ohm Res. ¼W
106. 100,000 ohm Res. ¼W
107. 1.7meg. Res. ¼W
108. 1meg. Res. ¼W
109. .0001 Mica Con. 1000V
111. .02mfd Pap. Con. 400V
112. .0003mfd Mica Con. 1000V
113. 1.75meg. Res. ¼W
114. .05mfd Pap. Con. 400V
115. .5mfd Pap. Con. 200V
116. .5mfd Pap. Con. 200V
120. .0001mfd Mica Con. 1000V
121. 1.7meg. Res. ¼W
122. 1meg. Res. ¼W
123. 200,000 ohm Res. ¼W
124. 150,000 ohm Res. ¼W
125. .05mfd Pap. Con. 400V
126. .05mfd Pap. Con. 600V
127. 3,000 ohm Res. ¼W
128. 100,000 ohm Res. (Adjustable) 1W
129. 50,000 ohm Res. ¼W
130. .05mfd Pap. Con. 400V
131. 10,000 ohm Res. ¼W
132. 20,000 ohm Res. ¼W
140. 50,000 ohm Res. ¼W
141. .001 Mica Con. 1000V
143. 20mfd W/W Con.
144. 100,000 ohm Res. ¼W
145. .05mfd Pap. Con. 200V
149. 30,000 ohm Res. ¼W
154. .0035mfd Mica Con. 1000V
155. 50mmfd W/W Con.

MONARCH 949

4-Valve Dual Wave Vibrator Powered Receiver

(Telephone dial tuning)

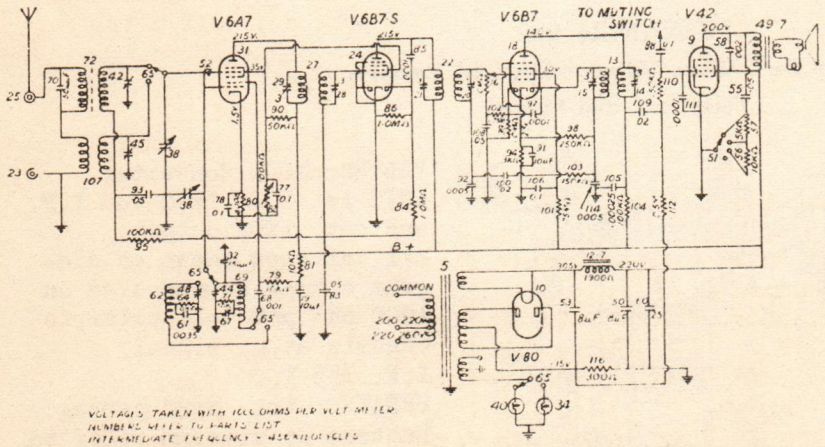


VALVES: 1C7G Converter. 1F7G 1st I.F. 1F7G 2nd I.F. and det. 1F5G output.
All voltages shown on diagram should be measured on 1000 ohm per volt meter, to chassis at no signal.
I.F. 455 K.C.
SPEAKER: Rola 8/20 permag.
Numbers on diagram refer to parts list.

11. .5mfd Metal Clad Generator Con.200V
35. 10mfd Dry elec.Con.300V
77. .003mfd Mica Con.2000V
78. .05mfd Pap. Con. 400V
79. 1mfd Pap. Con. 200V
81. 750,000 ohm Res. $\frac{1}{4}$W
83. .0003mfd Mica Con.1000V
84. 4mfd elec. Con.300V
85. 500 ohm Filter Choke
86. 10mfd Elec. Con. 300V
87. .5mfd Pap. Con. 400V
88. Twin 500mfd. Elec.Con.6V
89. 200,000 ohm Res. $\frac{1}{4}$W
90. .05mfd Pap. Con. 200V
91. .002mfd Pap. Con. 600V
92. .008mfd Pap. Con. 600V
93. .02mfd Pap. Con. 600V
94. 250,000 ohm Res. $\frac{1}{2}$W
95. 500,000 ohm Res. $\frac{1}{4}$W
96. .02mfd Pap. Con. 400V
97. .05mfd Pap. Con. 400V
100. .0001mfd Mica Con.1000V
101. 100,000 ohm Res. $\frac{1}{4}$W
102. 250,000 ohm Res. $\frac{1}{4}$W
103. .0001mfd Mica Con. 1000V
104. .1mfd Pap. Con. 400V
105. 250,000 ohm Res. $\frac{1}{4}$W
106. 150,000 ohm Res. $\frac{1}{4}$W
107. 1.7meg.Res$\frac{1}{4}$W
108. 1meg.Res.$\frac{1}{4}$W
109. .0001 Mica Con.1000V
111. .02mfd Pap Con.400V
112. .0003mfd Mica Con. 1000V
114. .05mfd Pap. Con.400V
115. .5mfd Pap. Con. 200V
116. .5mfd Pap. Con.200V
120. .0001mfd Mica Con.1000V
121. 1.7meg.Res. $\frac{1}{4}$W
122. 1meg.Res.$\frac{1}{4}$W
123. 100,000 ohm Res. $\frac{1}{4}$W
124. 150,000 ohm Res. $\frac{1}{4}$W
125. .05mfd Pap. Con. 400V
126. .05mfd Pap. Con. 600V
127. 3,000 ohm Res. $\frac{1}{4}$W
128. 100,000 ohm Res. (Adjustable) 1W
129. 50,000 ohm Res. $\frac{1}{2}$W
130. .05mfd Pap. Con. 400V
131. 10,000 ohm Res. $\frac{1}{2}$W
132. 20,000 ohm Res. $\frac{1}{2}$W
135. .0001mfd Mica Con. 1000V
140. 50,000 ohm Res. 1W
141. .001 Mica Con. 1000V
143. 20mmfd W/W Con.
144. 100,000 ohm Res. $\frac{1}{2}$W
145. .05mfd Pap. Con. 200V
149. 30,000 ohm Res. $\frac{1}{4}$W
154. .0035mfd Mica Con. 1000V
155. 50mmfd W/W Con.

MONARCH 953 CF

5-Valve Dual Wave A.C. Operated with Presto Tuning



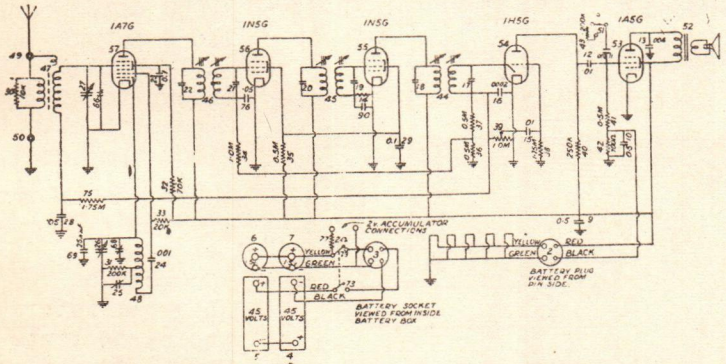
VALVES: 6A7 Converter 6B7S I.F. 6B7 2nd I.F. and det. 42 output. 80 rectifier.
All voltages shown on diagram to be measured with 1000 ohm per volt meter to chassis, no signal.
I.F. 456 K.C.
SPEAKER: 1900 ohm field.
Numbers on diagram refer to parts list.

19. 10mfd Dry Elec.Con. Type 119.300V
32. Compensating Capacity Con. 15mfd.
50. 8mfd 450W.V. Wet Elec. Con.450W.V.
53. 8mfd 500V.,W.V. Wet Elec. Con. 500W.V.

55. .05 Stedipower Con. 600V
56. 10,000 ohm Res. ½W
57. 5,000 ohm Res. 1W
58. .002 Pap. Con. 600V
60. .25mfd Con. 400V
61. .0035mfd Mica Con. 1000V
64. 30,000 ohm Res. ¼W
68. .001mfd Mica Con. 1000V
71. 50,000 ohm Res. ¼W
77. .1mfd Stedipower Con.400V
78. .1mfd Stedipower Con.400V
79. 10,000 ohm Res. ¼W
80. 400 ohm Res. ¼W
81. 10,000 ohm Res. ¼W
82. 100,000ohm Adj.Res.1W
83. .05mfd Stedipower Con.400V
84. 1meg.Res.¼W
85. .0001mfd Mica Con. 1000V
86. 1meg.Res.¼W
88. .1mfd Con. 400V
90. 50,000 ohm Res. ½W
91. 10mfd Dry Elec.Con.25W.V.
92. .0005mfd Mica Con. 1000V
93. .05mfd Con. 400V
94. 3,000 ohm Res. ¼W
95. 100,000 ohm Res. ¼W
97. .0001mfd Mica Con.1000V
98. 250,000 ohm Res. ¼W
99. 1meg.Res. ¼ Watt
100. .02mfd Stedipower Con.400V
101. 750,000 ohm Res. ¼W
102. 1.75 meg. Res. ¼W
103. 150,000 ohm Res. ¼W
104. 100,000 ohm Res. ¼W
105. .00025mfd Mica Con. 1000V
106. .1mfd Stedipower Con. 400V
108. .05mfd Stedipower Con. 400V
109. .02mfd Stedipower Con.400V
110. 150,000 ohm Res. ¼W
111. .0001mfd Mica Con. 1000V
112. 500,000 ohm Res. ¼W
114. .0005mfd Mica Con. 1000V
116. 300 ohm Res. 1Watt

MONARCH 950 GF

5-Valve Broadcast Battery Operated Receiver



VALVES: 1A7G Conver. 1N5G 1st I.F. 1N5G 2nd I.F. 1E5G det. 1A5G output.
All voltages to be measured with 1000 ohm per volt meter to chassis, no signal.
I.F. 455 K.C.
SPEAKER: Rola 66 permag.

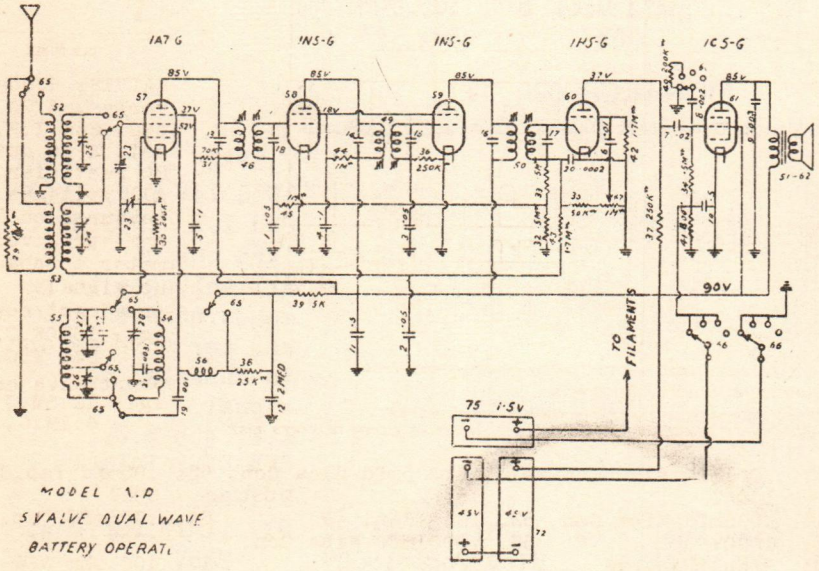
9. .5mfd Pap. Con. 200V
10. .5mfd Pap. Con.200V
11. .002mfd Pap. Con.400V
12. .01mfd Pap. Con.400V
13. .004mfd Pap. Con.600V
14. ¼meg.Res.
15. .01mfd Pap Con.400V
16. .0002mfd Mica Con. 1000V
17. .0001mfd fixed Mica Con.1000V
18. .0001mfd fixed Mica Con. 1000V
19. .0001mfd fixed Mica Con.1000V
20. .0001mfd fixed Mica Con.1000V
21. .0001mfd fixed Mica Con.1000V
22. .0001mfd fixed Mica Con.1000V
23. .1mfd Pap.Con. 200V
24. .001mfd Mica Con.1000V
28. .05mfd Pap. Con.200V
29. .1mfd Pap. Con. 200V
30. 10,000ohmRes.¼W
31. 200,000ohm" "

32. 70,000 ohm Res. ¼W
33. 20,000 ohm Res. ¼W
34. 1meg.Res.¼W
35. 500,000 ohm Res. ¼W
36. 500,000 ohm Res. ¼W
37. 500,000 ohm Res. ¼W
38. 1.75meg.Res.¼W
39. 1meg. Volume Control
40. 250,000 ohm Res. ¼W
41. 500,000 ohm Res. ¼W
42. 700 ohm Res. ¼W
43. 200,000 ohm Res. ¼W
69. 25mfd W/W Con. 1000V
75. 1.75meg.Res. ¼W
76. .05mfd Pap. Con. 200V
77. 2 ohms W/W Res. 2W
90. .05mfd Pap. Con. 200V

CAUTION: If an accumulator is used. The set should never be connected to any other but a two volt accumulator. A battery charger should never be connected to the accumulator whilst the set is also connected. Failure to observe these precautions will shorten the life of the valves, and consequently the efficient operation of the set itself. If external air cell or filament battery is used be sure the voltage DOES NOT EXCEED 1½ volts.

MONARCH 450 AAP

5-Valve Dual Wave Battery Operated Receiver (1.4 Volt)



VALVES: 1A7G converter.
1N5G 1st I.F.
1N5G 2nd I.F.
1H5G det.
1C5G output.
All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.
Numbers on diagram refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola 6/11 Permag.

Broadcast coverage: 1650 K.C. to 540 K.C.
Short Wave " : 22.25 M.C. to 6.85 M.C.

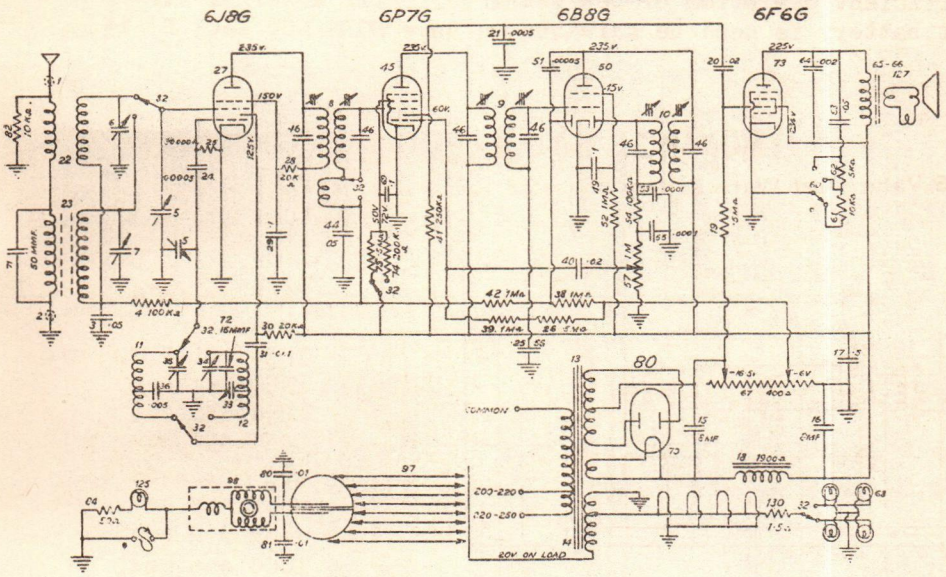
BATTERY LEADS: Black B negative 90V
Red B positive 90V
Green A negative 1.5V
Yellow A positive 1.5V

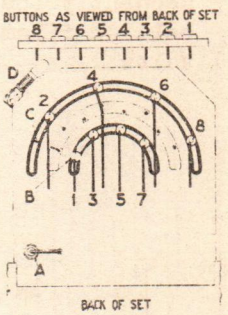
MONARCH 450 AAP (Contd.)

1. .05mfd Pap.Con.200V
2. .05mfd Pap.Con.200V
3. .05mfd Pap.Con.200V
4. .1mfd Pap.Con. 200V
5. .1mfd Pap.Con.200V
6. .01mfd Pap.Con.600V
7. .02mfd Pap.Con.400V
8. .002mfd Pap.Con600V
9. .003mfd Pap.Con600V
10. .5mfd Pap.Con. 200V
11. .5mfd Pap.Con. 200V
12. 2mfd Pap.Con. 400V
13. .0001mfd Mica Con. (silver)
14. .0001mfd Mica Con. (silver) 1000V
15. .0001mfd Mica Con. (silver) 1000V
16. .0001mfd Mica Con. (silver) 1000V
17. .0001mfd Mica Con. (silver) 1000V
18. .00005mfd Mica Con (silver) 1000V
19. .001mfd Mica Con. 1000V
20. .0002mfd Mica Con. 1000V
21. .0031mfd Mica Con. 1000V
22. 20mmfd W/W Con.
29. 10,000 ohm Res. ½W
30. 200,000 " " "
31. 70,000 " " "
32. 500,000 ohm " "
33. 500,000 " " "
34. 500,000 ohm Res. ½W
35. 50,000 ohm " "
36. 250,000 " " "
37. 250,000 " " "
38. 25,000 " " "
39. 5,000 " " "
40. 200,000 " " "
41. 800 ohm Res. ½W
42. 1.7meg. Res. ½W
43. 1.7meg. Res. ½W
44. 1meg. Res. ½W
45. 1meg. Res. ½W
47. 1meg.Vol. Cont.

MONARCH 9510 B.G.

5-Valve Dual Wave A.C. Operated, Motor Tuned





VALVES: 6J8G Converter. 6P7G I.F. 6B8G 2nd I.F. and det. 6F6G output. 80 rectifier. All voltages measured on 1000 ohm per volt meter to chassis, no signal. Broadcast coverage: 1620K.C. to 535 K.C. Short Wave coverage: 18.5M.C. to 6.1M.C.

3. .05mfd Pap.Con.200V
4. 100,000 ohm Res. ½W
15. 8mfd Wet Elec. Con. 500r.v.
16. 8mfd Wet Elec.Con. 500r.v.
17. 5mfd Pap.Con. 400v.
19. 500,000 ohm Res. ½W
20. .02mfd Pap.Con.400V
21. .0005mfd Mica Con. 1000V
24. .00005mfd Mica Con. 1000V
25. 30,000 ohm Res. ½W
26. 500,000 ohm Res. ½W
28. 20,000 ohm Res. ¼W
29. .1mfd Pap.Con.400V
30. 20,000 ohm Res. ½W
31. .001mfd Mica Con. 1000V
36. .005mfd Mica Con. 1000V
38. 1meg. Res. ½W
39. 1meg. Res. ½W
40. .02mfd Pap.Con. 400V
41. 250,000 ohm Res. ½W
42. 1meg. Res. ½W
46. .0001mfd Mica Con. 1000V
48. .05mfd Pap.Con. 200V
49. .1mfd Pap.Con. 400V
51. .00005mfd Mica Con. 1000V
52. 1meg. Res. ½W
53. .0001mfd Mica Con. 1000V
54. 100,000 ohm Res. ½W
55. .0001mfd Mica Con. 1000V
56. .25mfd Pap. Con. 200V
57. 1meg. Volume Cont. (Standard Tapped)
60. Tone Control Switch
61. 10,000 ohm Res. 1W
62. 5,000 ohm Res. ½W
63. .05mfd Pap.Con. 600V
64. .002mfd Pap.Con. 400V
67. 400 ohm W/W
69. .1mfd Pap.Con.400V
71. 50mmfd W/W Con.
72. 15mmfd W/W Con.
74. 200,000 ohm Res. ½W
75. 500,000 " " "
80. .01mfd Pap.Con. 400V
81. .01mfd Pap.Con. 400V
82. 10,000 ohm Res. ½W
84. 50 ohm W/W " 3W
126. 1.5 ohm W/W Res. 2 Watt.

MONARCH 9510 B.G. (Contd.)

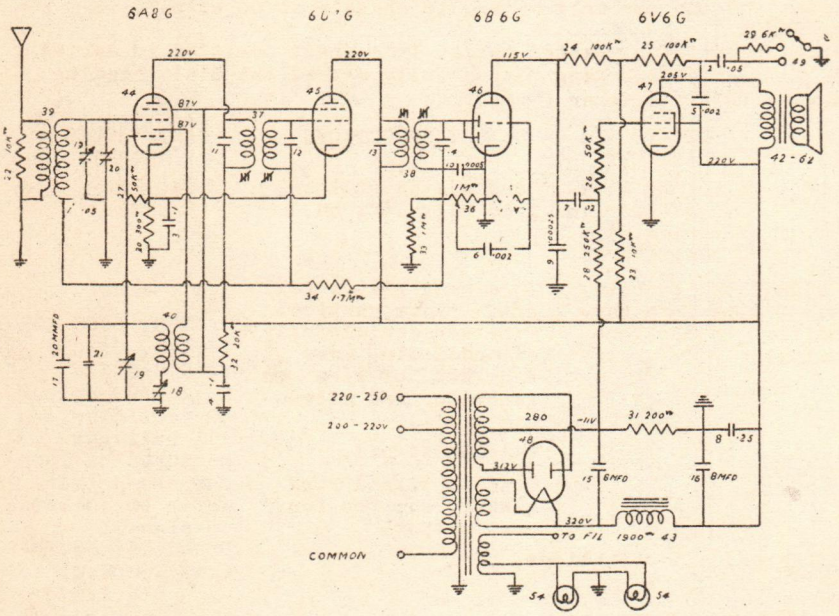
I.F. 455 K.C. SPEAKER: 1900 ohm field.

SETTING UP PRESS BUTTONS. (See illustration).

1. With tuning control, tune set to a desired station near the 600K.C. end of the dial.
2. Remove banana plug "A" from socket.
3. Press button No. 1 at left end of dial as viewed from the front of set, and globe "D" will light.
4. Move contact arm No. 1 on back of set (Illustration "B") to engage insulation strip "C", when globe "D" will go out, indicating that button No. 1 is correctly set up.
5. Tune next desired station, turning dial pointer to the right, as viewed from the front of set. Press button No. 2 and adjust contact No. 2. Continue on for each successive button in the same manner.
6. After setting all contacts replace banana plug and set is ready to operate. Press each button in turn to make sure set tunes accurately to each station.

MONARCH 541 A.N.

5-Valve Broadcast A.C. Operated Receiver



1. .05mfd Pap.Con.200V
2. .05mfd Pap.Con.400V
3. .1mfd Pap.Con. 200V
4. .1mfd Pap.Con. 400V
5. .002mfd Pap.Con.600V
6. .002mfd Pap.Con.600V
7. .02mfd Pap.Con.400V
8. .25mfd Pap.Con.400V
9. .00025mfd Mica Con. 1000V
10. .0005mfd Mica Con. 1000V
11. .0001mfd Mica Con. 1000V
12. .00005mfd Mica Con. 1000V
13. .0001mfd Mica Con. 1000V
14. .0001mfd Mica Con. 1000V
15. 8mfd Elec.Con.525PV
16. 8mfd Elec.Con.525PV
17. 20mmfd Wire Wound Cond.
22. 10,000 ohm Res. ½W
23. 10,000 ohm Res. ½W
24. 100,000 ohm " "
25. 100,000 ohm Res. ½W
26. 50,000 ohm Res. ½W
27. 50,000 ohm Res. ½W
28. 250,000 ohm Res. ½W
29. 5,000 ohm Res. ½W
30. 300 ohm Res. ½W
31. 200 ohm Res. 1W
32. 20,000 ohm Res. 1W
33. 1meg. Res. ½W
34. 1.7meg.Res. ½W
35. 10 meg. Res. 1 Watt
36. 1meg. Vol.Control

I.F. 455 K.C. SPEAKER: 1900 ohm field. Tuning Range 1650K.C. to 540K.C.

VALVES: 6A8G Converter. 6U7G I.F. 6B6G det. 6V6G output. 80 rectifier. All voltages shown on diagram to be measured on 1000 ohm per volt meter to chassis, at no signal.

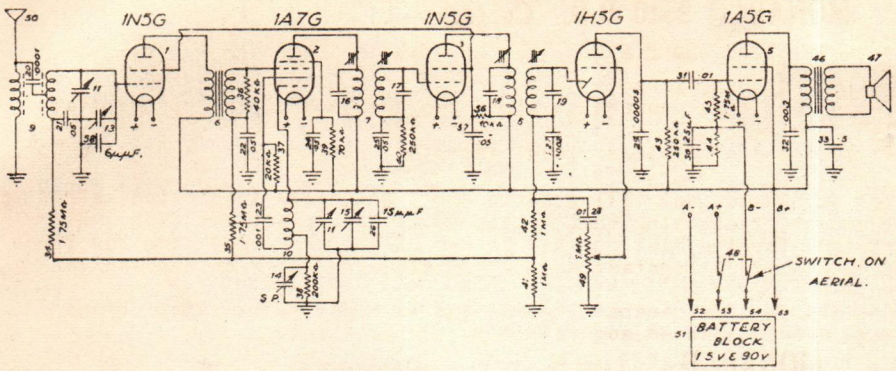
Numbers on diagram refer to parts list.

MONARCH (PORTABLE)

5-Valve Broadcast Dry Battery Operated Receiver

20. .0001 Fixed Mica Con. 1000V
21. .05 Pap.Con.200V
22. .05 Pap.Con.200V
23. .001 Fixed Mica Con. 1000V
24. .05 Pap.Con.200V
25. .05 Pap.Con.200V
26. 15mmfd W/W Con.
27. .0002 Fixed Mica Con. 1000V
28. .01 Pap.Con.600V
29. .00005 Fixed Mica Con. 1000V
30. 25mfd Elec.Con. 25V
31. .01 Pap.Con.600V
32. .003 Mica Con.1000V
33. .5 Pap.Con.200V
34. 1.75meg.Res.½W
35. 1.75meg.Res.½W
36. 40,000 ohm Res. (IN 6) ½W
37. 20,000 ohmRes.½
38. 200,000 " " "
39. 70,000 " " "
40. 250,000 " " "
41. 1meg.Res. ½W
42. 1meg.Res. ½W
43. 250,000 ohmRes.½
44. 1,000 " " "
45. 1.75meg. Res. ½
46. 25,000 ohm Input Transformer
47. 6-inch Permag. Speaker Type6-11

MONARCH G.C. PORTABLE (Contd.)



48. Double Pole Battery Switch
49. 1meg.Vol.Control
50. Telescopic Rod Aerial
51. 1.5V-90V Battery Block
52. Spring Battery Contact A Negative
53. Spring Battery Contact A positive
54. Spring Battery Contact B negative
55. Spring Battery Contact B positive
56. 10,000 ohm Res. ½W

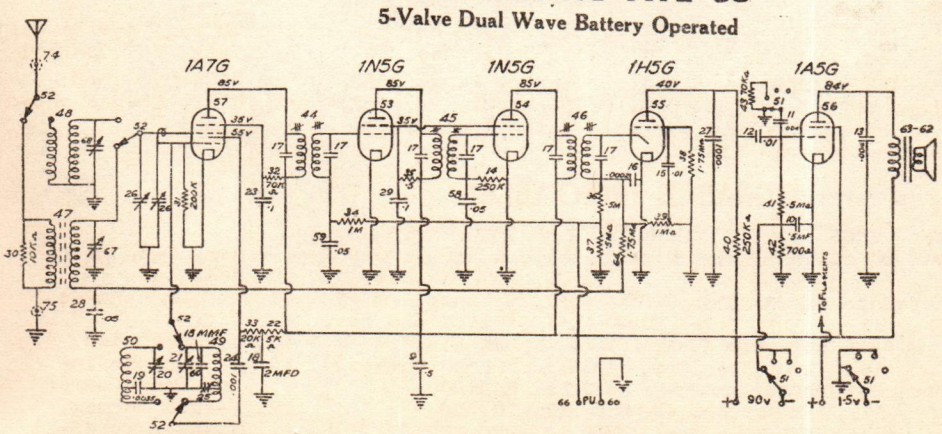
I.F. 455 K.C. SPEAKER: Permag.
VALVES: 1N5G R.F. 1A7G Converter. 1N5G I.F. 1H5G det. 1A5G output.
All voltages to be measured with 1000 ohm per volt meter, to chassis at no signal.
Tuning range from 1650 K.C. to 525 K.C.
Place set on its battery in working position, fasten aerial in correct position in aerial guide bush (screw "G", Fig.3). With condenser gang plates fully meshed set dial reading with the 100° mark at right angles to the speaker frame.

OPERATION	FREQUENCY	GENERATOR CONNECTIONS	DUMMY CAPACITY	INSTRUCTIONS	ADJ.PADDER SCREW
1.	455Kc.	To grid of 1A7G	.01mfd Mica condenser in series with generator.	Gang plates full in, grid clip left on.	94, 93, 92, 91
2.	1650Kc.	Radiate signal by connecting 2 ft. of wire in a vertical position to the generator output.		Turn gang plates full out. Place vertical receiver aerial fully extended 6in. away from 2ft. of wire on generator and attenuate signal.	15
3.	1400Kc.	" " "		Tune in signal.	13
4.	600Kc.	" " "		Tune in signal rock gang to and fro for max. output.	14

Repeat all operations.

MONARCH 952 TYPE GG

5-Valve Dual Wave Battery Operated



9. .5mfd Pap.Con. 200V
10. .5mfd Pap.Con. 200V
11. .004mfd Pap. Con.600V
12. .01mfd Pap. Con. 400V
13. .004mfd Pap. Con.600V
14. 250,000 ohm Res. ½ Watt
15. .01mfd Pap. Con. 400V
16. .0002mfd Mica Con. 1000V

MONARCH 952 TYPE GG (Contd.)

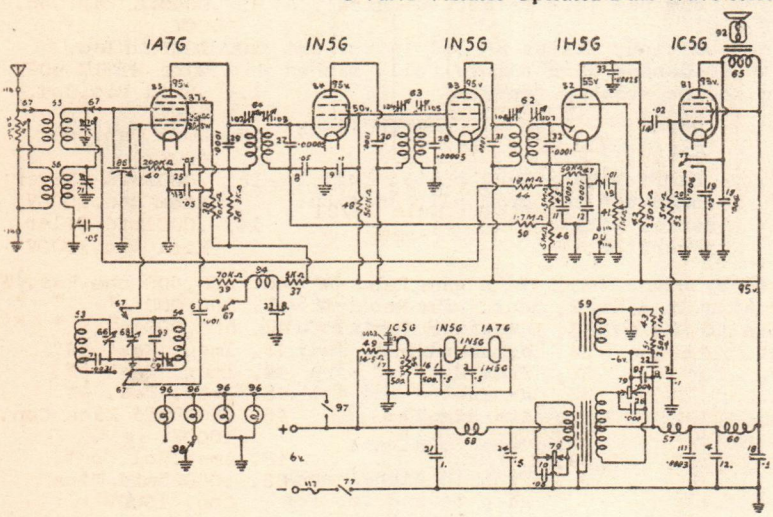
17. .0001mfd Sil.Mica Con. (6) 1000V
18. 2mfd Pap.Con.400V
19. .0035mfd Mica Con. 1000V
22. 5,000 ohm Res. ¼W
23. .1mfd Pap.Con.200V
24. .001mfd Mica Con. 1000V
27. .0001mfd Mica Con. 1000V
28. .05mfd Pap. Con. 200V
29. .1mfd Pap.Con. 200V
30. 10,000ohmRes. ¼W
31. 200,000 " " "
32. 70,000 " " "
33. 20,000 ohm Res. ¼W
34. 1meg.Res. ½W
35. 500,000 ohm Res. ¼W
36. 500,000 ohm Res. ¼W
37. 500,000 ohm Res. ¼W
38. 1.75meg.Res. ¼W
39. 1meg. Vol.Control
40. 250,000 ohm Res. ¼W
41. 500,000 ohm Res. ¼W
42. 700 ohm Res. ¼W
43. 70,000 ohm Res. ½W
58. .05mfd Pap.Con. 200V
59. .05mfd Pap.Con. 200V
60. 15mmfd Wire Wound Con.
64. 1.75meg. Res. ¼W

I.F. 455 K.C. SPEAKER: Permag. type 10/21

VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1A5G output.
All voltages shown on diagram, and should be measured on 1000 ohm per volt meter to chassis at no signal. Numbers on diagram refer to parts list.

458 AQM MANTEL AND 459 AQ CONSOLE

5-Valve Vibrator Operated Dual Wave Receivers



1. .5mfd Paper Con. 200V
2. .5mfd Paper Con. 200V
3. .1mfd Paper Con. 200V
4. 12mfd Electrolytic Con. (ET1003) 350PV
5. .05mfd Paper Con. 200V
6. .001mfd Mica Con. 1000V
7. .0031mfd Mica Con. 1000V
8. .05mfd Paper Con. 200V
9. .1mfd Paper Con. 200V
10. .05mfd Paper Con. 200V
11. .0002mfd Mica Con. 1000V
12. .0001mfd Paper Con.1000V
13. .01mfd Paper Con. 400V
14. .02mfd Paper Con. 400V
15. .004mfd Paper Con. 600V
16. 500mf Electrolytic Con. (EEC901) 12VP
17. 500mf Electrolytic Con. (EEC901) 12VP
18. .5mfd Braided Paper Con. 200V
19. .02mfd Pap.Con.400V
20. .006mfd Pap.Con. 600
21. 1mfd Braided Paper Con. 200V
22. 8mfd Electrolytic Con. 350PV
23. 8mfd Electrolytic Con. 350PV
24. .5mfd Braided Paper Con. 200V
25. .05mfd Pap.Con.200V
26. .008mfd Mica Con. 2000V
27. T.C.C. .00005mfd Silver Mica Con.
28. T.C.C. .00005mfd Silver Mica Con.
29. T.C.C. .0001mfd Silver Mica Con.
30. T.C.C. .0001mfd Silver Mica Con.
31. T.C.C. .0001mfd Silver Mica Con.
32. T.C.C. .0001mfd Silver Mica Con.
33. .00025mf Mica Con. 1000V
34. 20,000 ohmRes. ½W
35. 700 ohm Res. ½W
36. 3,000 ohm Res. ½W
37. 5,000 ohm Res. ½W
38. 70,000 " " "
39. 70,000 ohm Res. ½W
40. 200,000 " " "
41. 1meg. Vol. Cont.
42. 250,000 ohmRes. ½W
43. 1.0meg.Res. ½W
44. 1.75meg.Res. ½W
45. 500,000ohm Res. ½W
46. 500,000 " " "
47. 50,000 " " "
48. 500,000 " " "
49. 14.5 ohm Res. ½W
50. 1.75meg. " "
51. 250,000 ohm" "
52. 500,000 ohm" "

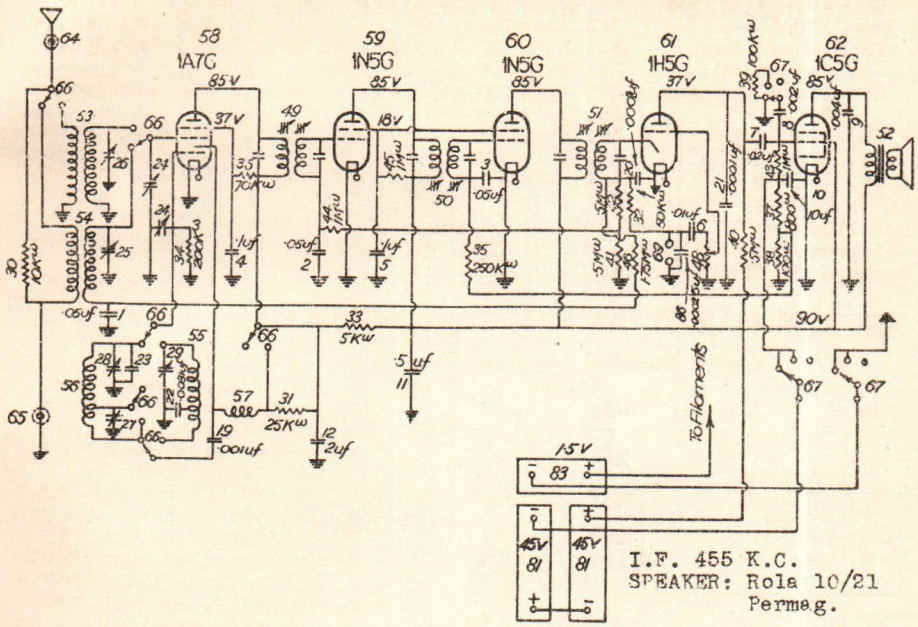
I.F. 455 K.C. SPEAKER: Permag.

VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1C5G output.
All voltages are shown on diagram, and should be measured on 1000 ohm per volt meter to chassis at no signal.
Numbers on diagram refer to parts list.

Broadcast coverage from 1650 K.C. to 540 K.C.
Short Wave coverage from 22.25 M.C. to 6.8 M.C.

MONARCH 452 B.N.

5-Valve Dual Wave Battery Operated Receiver (1.4 Volt)



1. .05mfd Pap.Con. 200V
2. .05mfd Pap.Con. 200V
3. .05mfd Pap.Con. 200V
4. .1mfd Pap.Con. 200V
5. .1mfd Pap.Con. 200V
6. .01mfd Pap.Con. 600V
7. .02mfd Pap.Con. 400V
8. .002mfd Pap.Con. 600V
9. .004mfd Pap.Con. 600V
10. 10mfd Elec. type ET717 40PV
11. .5mfd Pap.Con. 200V
12. 2mfd Pap.Con. 400V
13. .0001mfd Silver Mica Con.1000V
14. .0001mfd Siler Mica Con.1000V
15. .0001mfd Silver Mica Con. 1000V
16. .0001mfd Silver Mica Con. 1000V
17. .00005mfd Silver Mica Con. 1000V
18. .00005mfd Silver Mica Con. 1000V
19. .001mfd Mica Con. 1000V
20. 1.7meg.Res.$\frac{1}{2}$W
21. .0001mfd Mica Con. 1000V
22. .0031mfd Mica Con. 1000V
23. 20mmfd W/W Con.
30. 10,000ohm Res.$\frac{1}{2}$W
31. 25,000ohm Res. $\frac{1}{2}$W
32. 50,000ohm Res. $\frac{1}{2}$W
33. 5,000 ohm Res. $\frac{1}{2}$W
34. 200,000 ohm " "
35. 250,000 " " "
36. 70,000 " " "
37. .800 ohm Res. $\frac{1}{2}$W
38. 100 " " "
39. 100,000" " "
40. 500,000 ohm Res.$\frac{1}{2}$W
41. 500,000 " " "
42. 500,000 " " "
43. 1meg. Res. $\frac{1}{2}$W
44. 1meg. Res. $\frac{1}{2}$W
45. 1meg. Res. $\frac{1}{2}$W
46. .0002mfd Mica Con. 1000V
48. 1meg.Vol.Cont.
86. .00025mfd Mica Con. 1000V

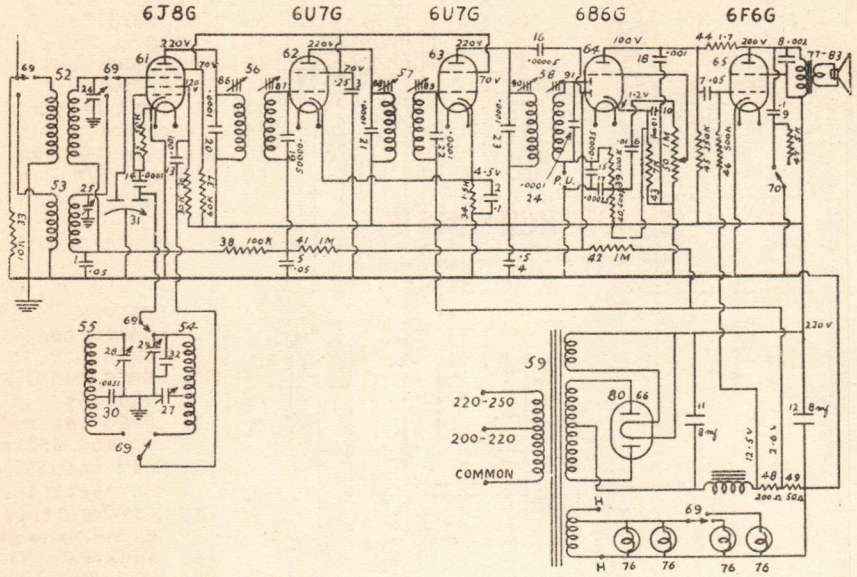
Broadcast Coverage = 1650 K.C. to 540 K.C.
Short Wave " = 22.25 M.C. to 6.85 M.C.
VALVES: 1A7G Converter. 1N5G 1st I.F. 1N5G 2nd I.F. 1H5G det. 1C5G output.
BATTERY LEADS: Black B negative 90 volts. Red B positive 90 volts. Green A negative 1.5 volts. Yellow A positive 1.5 volts. All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.

MONARCH 466 B.K. AND 463 BKM

6-Valve Dual Wave A.C. Operated Receivers

1. .05mfd Pap.Con.200V
2. .1mfd Pap.Con. 200V
3. .25mfd Pap.Con.400V
4. .5mfd Pap.Con.400V
5. .05mfd Pap.Con.200V
6. .01mfd Pap.Con.400V
7. .05mfd Pap.Con.400V
8. .002mfd Pap.Con.600V
9. .1mfd Pap.Con.400V
10. 10mfd Dry Elec.Con. Type ET717 40VP
11. 8mfd Dry Elec.Con. Type ET1015 525VP
12. 8mfd Dry Elec.Con. Type ET1015 525VP
13. .001mfd Mica Con. 1000V
14. .00005mfd Mica Con. 1000V
15. .00025mfd Mica Con. 1000V
16. .00005mfd Mica Con. 1000V
17. .00025mfd Mica Con. 1000V
18. .001mfd Mica Con. 1000V
19. .00005mfd Silver Mica Con. 1000V
20. .0001mfd Silver Mica Con. 1000V
21. .0001mfd Silver Mica Con. 1000V
22. .0001mfd Silver Mica Con. 1000V
23. .0001mfd Silver Mica Con. 1000V
24. .0001mfd Silver Mica Con. 1000V
30. .0031mfd Mica Con.
32. 20mmf W/W Bifilar capacity
33. 10 000 ohm Carbon Res. $\frac{1}{2}$ Watt
34. 1,500 ohm Carbon Res. $\frac{1}{2}$ Watt
35. 50,000 ohm Carbon Res. $\frac{1}{2}$ Watt
36. 30,000 ohm Carbon Res. 1 Watt
37. 60,000 ohm Carbon Res. $\frac{1}{2}$ Watt
38. 100,000 ohm Carbon Res. $\frac{1}{2}$ Watt

MONARCH 466 B.K. AND 463 BKM. (Contd.)

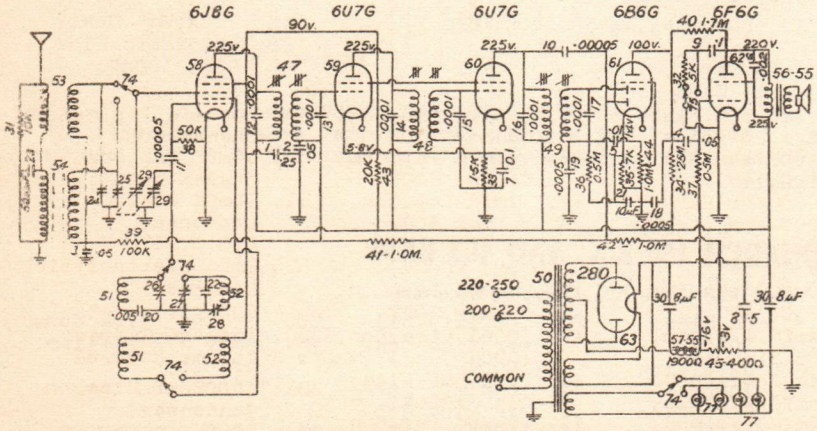


39. 100,000 ohm Carbon Res. ½W
40. 500,000 ohm Carbon Res. ½W
41. 1meg. ohm Carbon Res. ½W
42. 1megohm Carbon Res. ½W
43. 7,000 ohm Carbon Res. ½W
44. 1.7meg. Carbon Res. ½W
45. 250,000 ohm Carbon Res. ½W
46. 500,000 ohm Carbon Res. ½W
47. 5,000 ohm Carbon Res. ½W
48. 200 ohm W/W Res. 3 Watt
49. 50 ohm W/W Res. 3 Watt
50. 1meg. Vol.Cont.

I.F. 455 K.C. SPEAKER: 1900 ohm field.
VALVES: 6J8G Converter. 6U7G 1st I.F. 6U7G 2nd I.F. 6B6G det. 6F6G output. 80 rectifier.
All voltages shown to be measured with 1000 ohm per volt meter, to chassis, no signal.
Broadcast coverage: 1650 K.C. to 540 K.C. Short Wave coverage: 22.25M.C. to 6.8 M.C.

MONARCH 1066 A.S.

6-Valve A.C. Dual Wave Receiver



VALVES: 6J8G Converter. 6U7G 1st I.F. 6U7G 2nd I.F. 6B6G det. 6F6G output. 80 rectifier.

All voltages shown on diagram and should be measured on 1000 ohm per volt meter to chassis at no signal.

Broadcast coverage is from 1620K.C. to 535K.C. Short Wave from 18.5M.C. to 6.1 M.C.

Standard Alignment procedure.
I.F. 455 K.C.
SPEAKER FIELD: 1900 ohms.

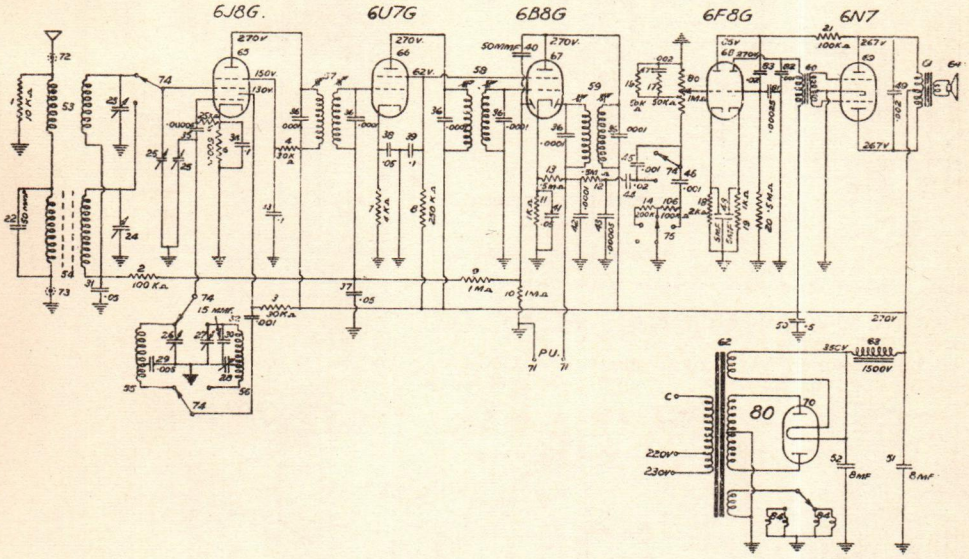
1. .25mfd Pap.Con. 400V
2. .05mfd Pap.Con. 200V
3. .05mfd Pap.Con. 200V
4. .05mfd Pap.Con. 400V
5. .01mfd Pap.Con. 400V
6. .002mfd Pap.Con. 400V
7. .1mfd Pap.Con. 200V
8. .5mfd Pap.Con. 400V
9. .1mfd Pap.Con. 400V
10. .00005mfd Mica Con. 1000V
11. .00005mfd Mica Con. 1000V
12. .0001mfd Mica Con. 1000V

MONARCH 1066 AS (Contd.)

13. .0001mfd Mica Con. 1000V
14. .0001mfd Mica Con. 1000V
15. .0001mfd Mica Con. 1000V
16. .0001mfd Mica Con. 1000V
17. .0001mfd Mica Con. 1000V
18. .0005mfd Mica Con. 1000V
19. .0005mfd Mica Con. 1000V
20. .005mfd Mica Con. 1000V
21. 10mfd Dry Elec. Con. 25V
22. 15mmfd W/W Con.
23. .50mmfd W/W Con.
30. 8-8 Dry Elec. Con.525V.p.v.
31. 10,000ohmRes.$\frac{1}{4}$W
32. 5,000 " " "
33. 1,500 " " "
34. 250,000" " "
35. 7,000 " " "
36. 500,000" " "
37. 500,000 ohm Res. $\frac{1}{4}$W
38. 50,000 " " "
39. 100,000 " " "
40. 1.7 meg. Res. $\frac{1}{2}$W
41. 1meg. Res. $\frac{1}{4}$W
42. 1meg. Res. $\frac{1}{4}$W
43. 20,000 ohm Res. 1W
44. 1meg. Vol. Cont.
45. 400 ohm W/W Res.
46. 1.5 ohm W/W Res.

MONARCH 966 E.

6-Valve Dual Wave A.C. Operated Receiver



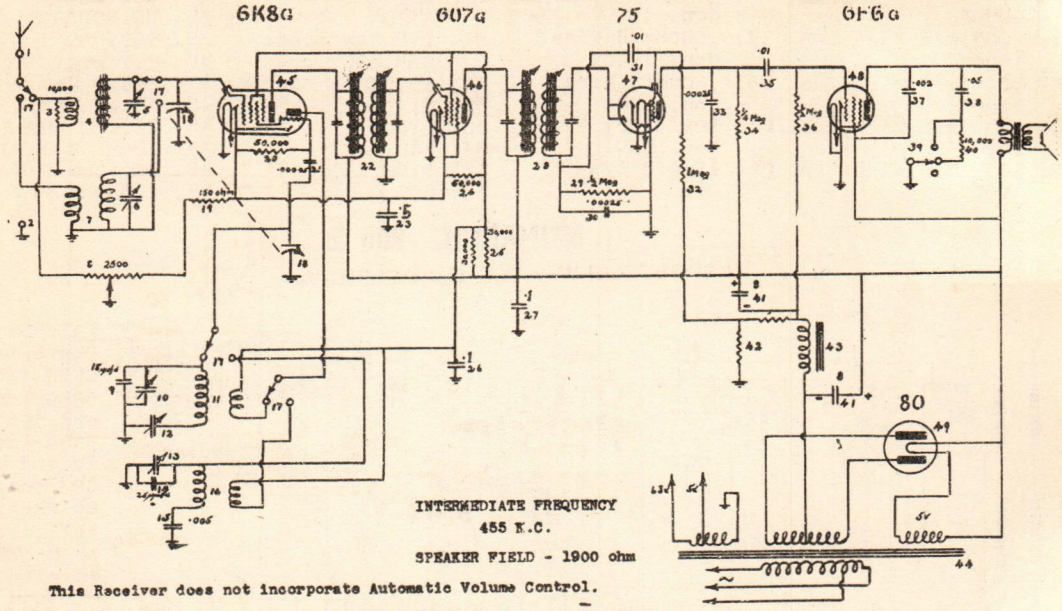
VALVES: 6J8G - Converter.
6U7G I.F.
6B8G 2nd I.F. and det.
6F8G 1st audio and driver.
6N7 output.
80 rectifier.
All voltages to be measured with 1000 ohm per volt meter, to chassis, no signal.
Numbers on circuit refer to parts list.
I.F. 455 K.C.
SPEAKER: Rola F/10

1. 10,000 ohm Res. I.R.C. $\frac{1}{4}$W
2. 100,000 ohm Res. I.R.C. $\frac{1}{4}$W
3. 30,000 ohm Res. I.R.C. 1W
4. 30,000 ohm Res. I.R.C. $\frac{1}{2}$W
5. 25,000 ohm Res. I.R.C. $\frac{1}{4}$W
6. 500 ohm Res. $\frac{1}{2}$W
7. 4,000 ohm " 1W
8. 250,000 ohm Res I.R.C. $\frac{1}{2}$W
9. 1meg. Res. I.R.C. $\frac{1}{4}$W
10. 1meg. Res. I.R.C. $\frac{1}{4}$W
11. 1,000 ohmRes. $\frac{1}{4}$W
12. 500,000 ohm Res I.R.C. $\frac{1}{4}$W
13. 500,000 ohm Res I.R.C. $\frac{1}{4}$W
14. 200,000 ohm Res I.R.C. $\frac{1}{4}$W
16. 50,000 ohm Res. I.R.C. $\frac{1}{4}$W
17. 50,000 ohm Res. I.R.C. $\frac{1}{4}$W
18. 2,000 ohm Res. $\frac{1}{2}$W
19. 1,000 ohm Res. $\frac{1}{2}$W
20. 500,000 ohm Res. I.R.C. $\frac{1}{4}$W
21. 100,000 ohm Res. I.R.C. $\frac{1}{2}$W
22. 50mmfd W/W Con.
29. .005 Simplex Mica Con.1000V
30. 15mmfd W/W Con.
31. .05mfd Pap.Con. Chanex 200V
32. .001 Mica Con.1000V
33. .1mfd Pap.Con. Chanex 400V
34. .1mfd Pap.Con. Chanex 400V
35. .00005mf Simplex Mica Con.1000V
36. .0001mfd Ceramic Mica Con.
37. .05mfd Pap.Con. Chanex 200V
38. .05mfd Pap.Con. Chanex 200V
39. .1mfd Pap.Con. Chanex 400V
40. .00005mf Mica Con. 1000V
41. .05mfd Pap.Con. Chanex 200V
42. .0001 Mica Con. 1000V
43. .00005mf Mica Con. 1000V
44. .02mfd Pap.Con. Chanex 400V
45. .001mfd Mica Con. 1000V
46. .001mfd Mica Con. 1000V
47. .002mfd Pap. Con. 600V
48. 5/5mfd Elec. Con. 15p.v.
49. .002mfd Pap.Con. Chanex 400V
50. .5mfd Pap.Con. Chanex 400V
51. 16mfd Elec. Condenser 500 p.v.
52. 8mfd electrolytic Condenser 500 p.v.
80. 1megohm Tapped Volume Control.
81. .00025mf Mica Condenser 1000V
82. .001mf Mica Condenser 1000V
83. .02mf Pap.Con. 500V
106. 100,000 ohm Res. $\frac{1}{2}$W
110. 1.5 ohm W/W Resistor.

NATIONAL RADIO

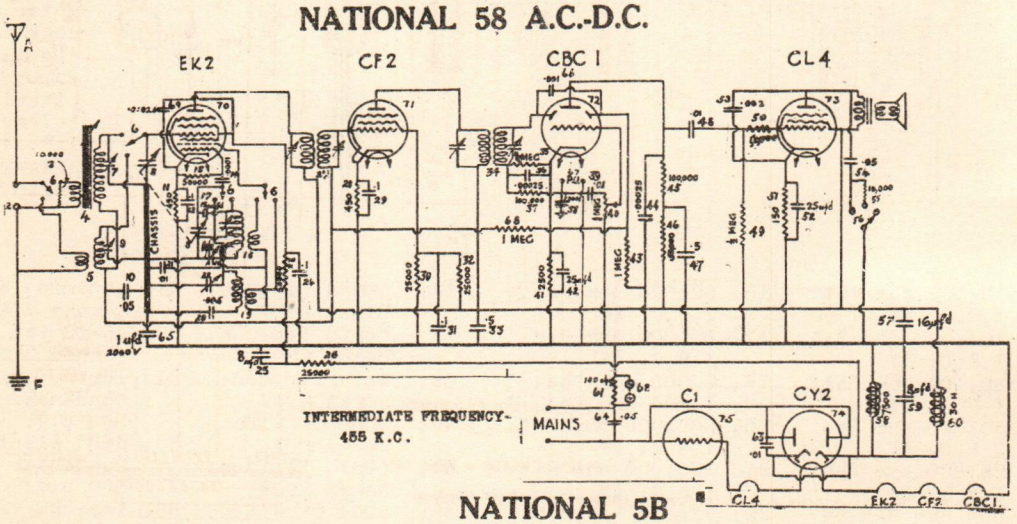
Manufactured by National Radio Corporation, Adelaide

NATIONAL 9/41 BANTAM

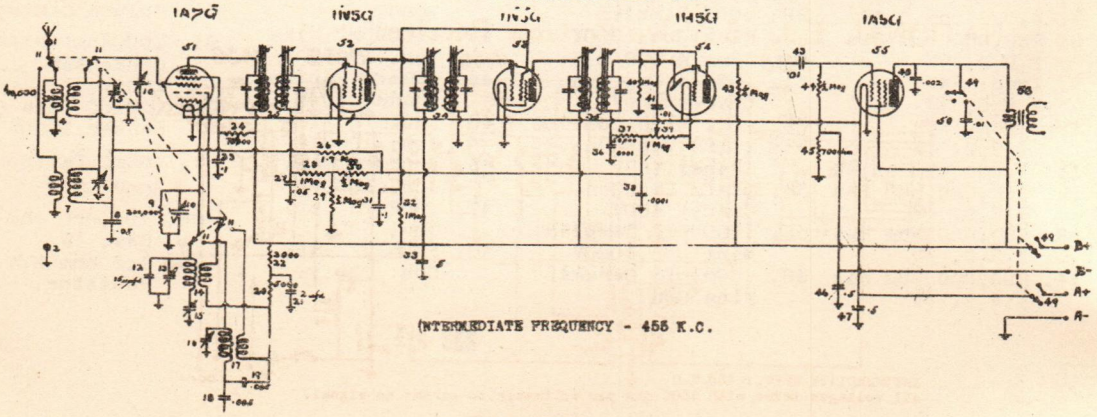


This Receiver does not incorporate Automatic Volume Control.

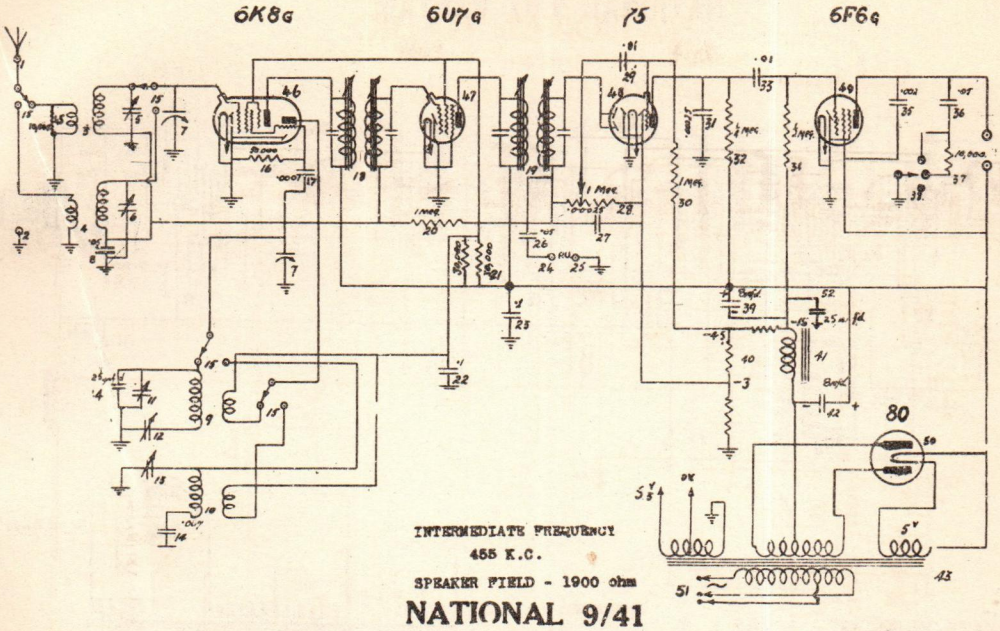
NATIONAL 58 A.C.-D.C.



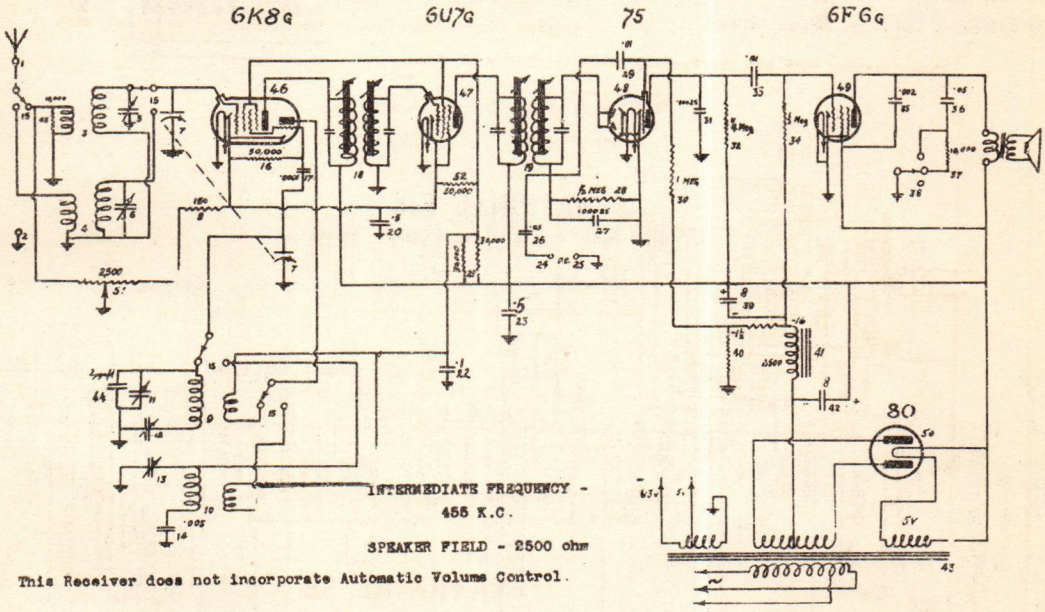
NATIONAL 5B



NATIONAL 9/46S A.V.C.

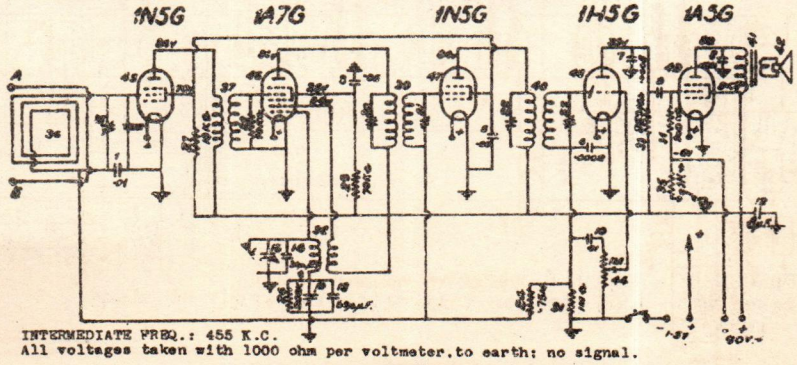


NATIONAL 9/41



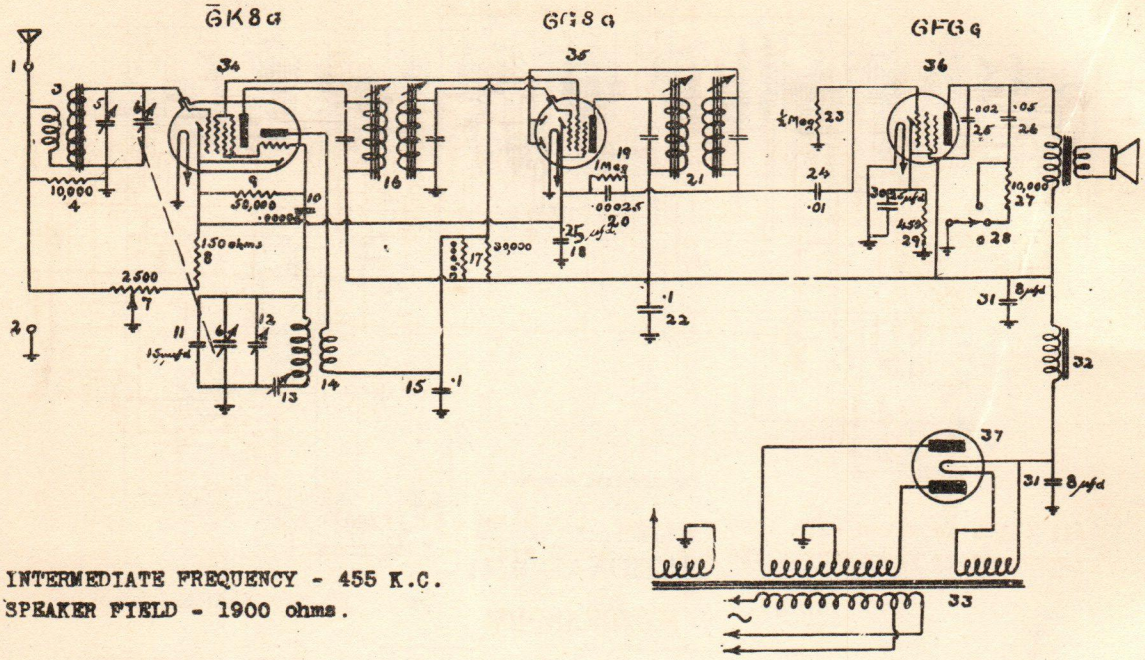
This Receiver does not incorporate Automatic Volume Control.

NATIONAL E,JJ - 5 Valve Portable Receiver



INTERMEDIATE FREQ.: 455 K.C.
All voltages taken with 1000 ohm per voltmeter, to earth: no signal.

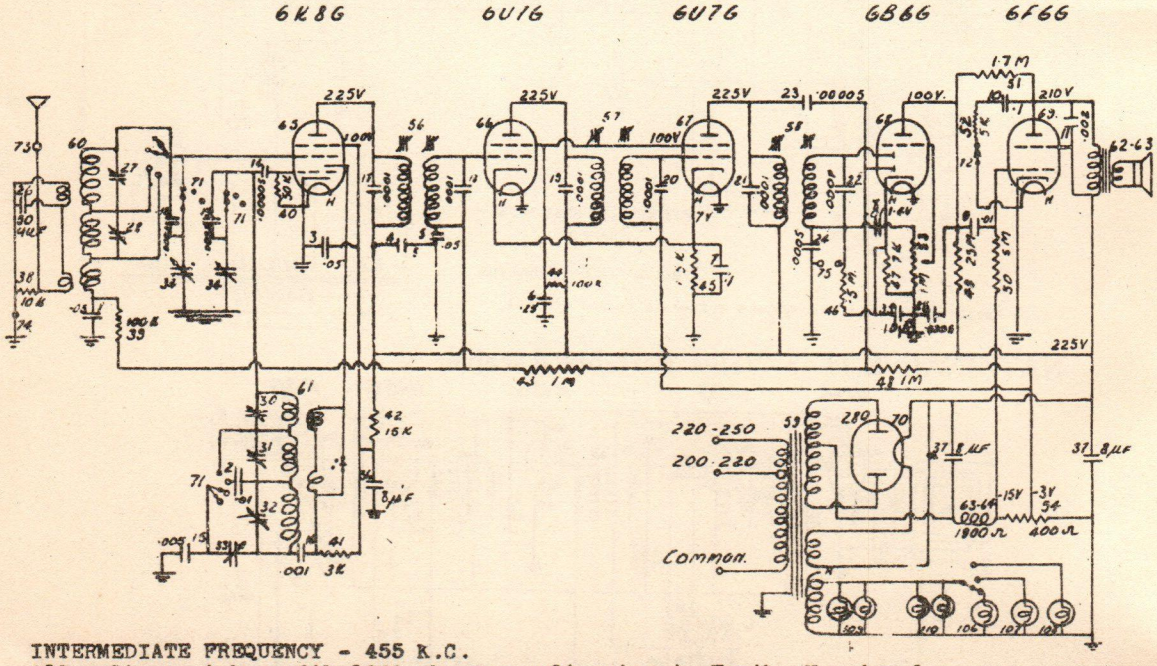
NATIONAL 9/37 BANTAM



INTERMEDIATE FREQUENCY - 455 K.C.
SPEAKER FIELD - 1900 ohms.

NATIONAL EJK

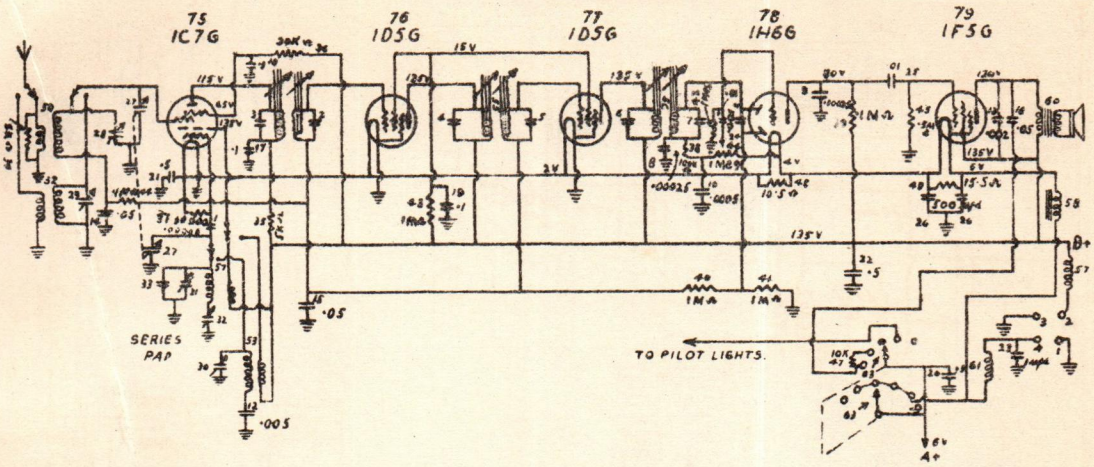
6-Valve A.C. Triple Wave Console Receiver



INTERMEDIATE FREQUENCY - 455 K.C.
All voltages taken with 1000 ohm per volt meter to Earth. No signal.
SPEAKER FIELD· 1900 ohms

NATIONAL EJM

5-Valve Vibrator Receiver



All voltages taken with 1000 ohms per volt Meter. No signal.
INTERMEDIATE FREQUENCY - 455 K.C. SPEAKER FIELD - 1900 ohms.

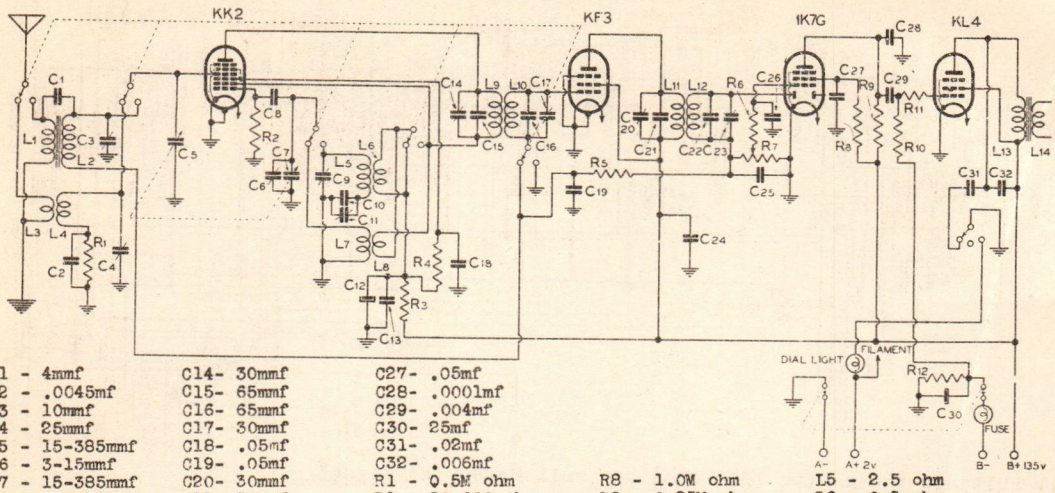
MEMORANDUM

PHILIPS RADIO

Manufactured by Philips Lamps (A'sia) Pty. Ltd., Sydney

PHILIPS 1044

4-Valve Dual Wave Battery Receiver



C1 - 4mmf
C2 - .0045mf
C3 - 10mmf
C4 - 25mmf
C5 - 15-385mmf
C6 - 3-15mmf
C7 - 15-385mmf
C8 - .0001mf
C9 - 30mmf
C10- 320mmf
C11- 30mmf
C12- 32mf
C13- .05mf
C14- 30mmf
C15- 65mmf
C16- 65mmf
C17- 30mmf
C18- .05mf
C19- .05mf
C20- 30mmf
C21- 80mmf
C22- 80mmf
C23- 30mmf
C24- 0.1mf
C25- .0001mf
C26- .0001mf
C27- .05mf
C28- .0001mf
C29- .004mf
C30- 25mf
C31- .02mf
C32- .006mf
R1 - 0.5M ohm
R2 - 50,000 ohm
R3 - 1,600 ohm
R4 - 50,000 ohm
R5 - 2.3M ohm
R6 - 50,000 ohm
R7 - 0.5M ohm
R8 - 1.0M ohm
R9 - 0.25M ohm
R10- 1.0M ohm
R11- 0.1M ohm
R12- 400 ohm
L1 - 20 ohm
L2 - 2.5 ohm
L5 - 2.5 ohm
L6 - 0.5 ohm
L9 - 8 ohm
L10- 8 ohm
L11- 8 ohm
L12- 8 ohm
L13- 650 ohm
L14- 0.4 ohm

VALVES: KK2 Convertor. KF3 I.F. 1K7G det. KL4 output. COVERAGE: 540-1520 K.C. and 8-22 m.c.
CONSUMPTION: "A" = 0.44 amp. approx. "B" = 13 M/A approx. I.F. 472.5 K.C.

VOLTAGE ANALYSIS.

VALVE TYPE	PLATE VOLTAGE (Os.Plate 120)	PLATE CURRENT	SCREEN GRID VOLTAGE	BIAS VOLTAGE	FILAMENT VOLTAGE
KK2	120	1.0	55	0	2.0
KF3	130	2.5	130	0	2.0
1K7G	30	0.3	20	0	2.0
KL4	125	6.0	130	5	2.0

NOTE: The abovementioned voltage values with the exception of bias voltages are measured between the socket points indicated and chassis with the receiver in the no signal condition and with the volume control at zero. Bias voltages are to be measured at the source of the voltage, as incorrect readings will otherwise be obtained. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10% from the figures quoted.

PHILIPS 1052

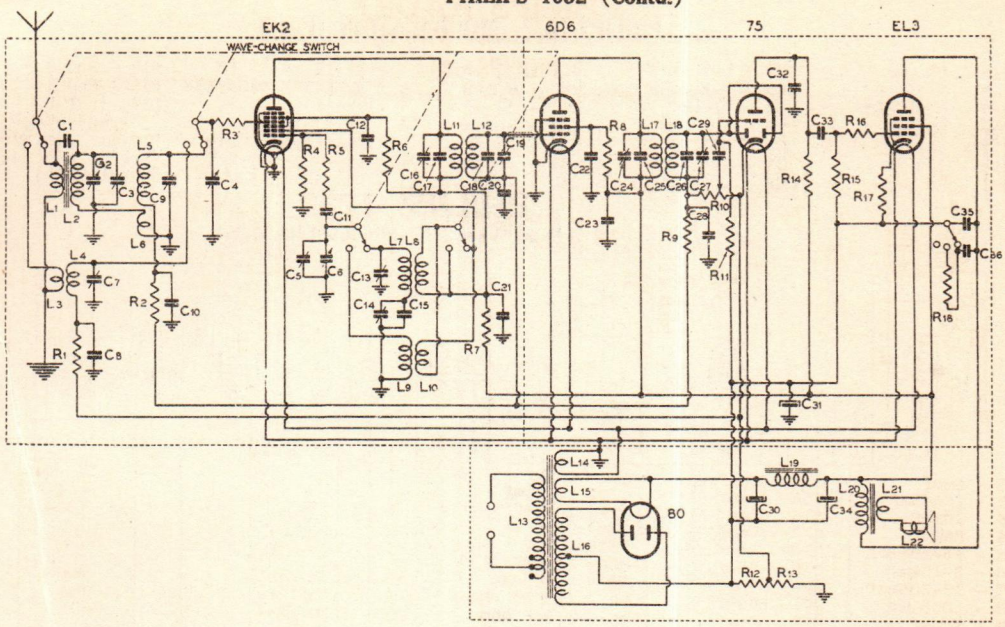
4/5 Dual Wave A.C. Operated Receiver

C1 - 6mmf
C2 - 15-385mmf
C3 - 5-30mmf
C4 - 15-385mmf
C5 - 3-15mmf
C6 - 15-385mmf
C7 - 25mmf
C8 - 0.0045mf
C9 - 25mmf
C10- 0.05mf
C11- 0.0001
C12- 0.05
C13- 25mmf
C14- 60mmf
C15- 320mmf
C16- 30mmf
C17- 80mmf
C18- 65mmf
C19- 30mmf
C20- 0.05mf
C21- 0.05mf
C22- 0.05mf
C23- 0.1mf
C24- 30mmf
C25- 80mmf
C26- 80mmf
C27- 30mmf
C28- 0.0001mf
C29- 0.02mf
C30- 8mf
C31- 25mf
C32- 0.0001mf
C33- 0.004mf
C34- 32mf
C35- 0.006mf
C36- 0.02mf
R1 - 0.5M ohm
R2 - 0.1M ohm
R3 - 50 ohm
R4 - 50,000 ohm
R5 - 50 ohm
R6 - 150,000 ohm
R7 - 5,000 ohm
R8 - 60,000 ohm
R9 - 1M ohm
R10- 5M ohm Vol.Con.
R11- 1M ohm
R12- 100 ohm
R13- 100 ohm
R14- 250,000 ohm
R15- 1M ohm
R16- 100,000 ohm
R17- 150 ohm
R18- 10,000 ohm
L1 - 20 ohm
L2 - 2.5 ohm
L5 - 3.3 ohm
L7 - 2.5 ohm
L8 - 0.5 ohm
L11- 8.5 ohm
L12- 8.5 ohm
L13- 50 ohm
L16- 500 ohm
L17- 8.5 ohm
L18- 8.5 ohm
L19- 1.500 ohm
L20- 650 ohm
L21- 0.5 ohm
L22- 0.5 ohm

VOLTAGE ANALYSIS.

VALVE TYPE	PLATE VOLTAGE	PLATE CURRENT	SCREEN GRID VOLTAGE	BIAS VOLTAGE
EK2	205 Osc. Plate G.2 = 215	0.8	45	Across R13 - 1.6
6D6	215	8.0	85	Across R13 - 1.6
75	100	0.3	--	Across R12 - 1.6
EL3	190	33	215	Across R17 - 6.0

VALVES: EK2 Convertor. 6D6 I.F. 75 det. EL3 output. 80 rectifier. COVERAGE: 540-1520 K.C. and 8-22 M.C. I.F. 472 K.C. SPEAKER: 1500 ohm field.



PHILIPS 1052—MODIFICATION

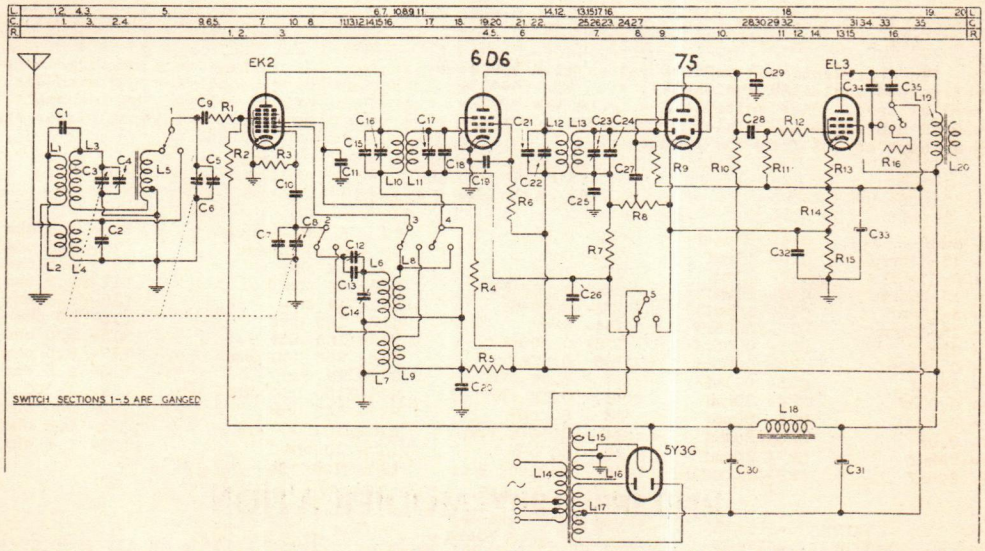
In all 1052 Radioplayers with Serial Numbers greater than 1/8001 the following modifications will apply:

CIRCUIT. The circuit will be in accordance with the diagram included on this page.

COMPONENT PARTS. A complete list of the components shown in the circuit diagram is provided herewith. Other components, such as mechanical parts, are unaltered, and are in accordance with the code numbers quoted in the original 1052 Service Data.

IT IS IMPORTANT when ordering replacement parts to check the serial number of the set, and observe the changes in this modification where applicable. Preferably, serial numbers should be quoted in all cases as well as the code numbers of the part concerned.

MODIFIED CIRCUIT DIAGRAM 1052.



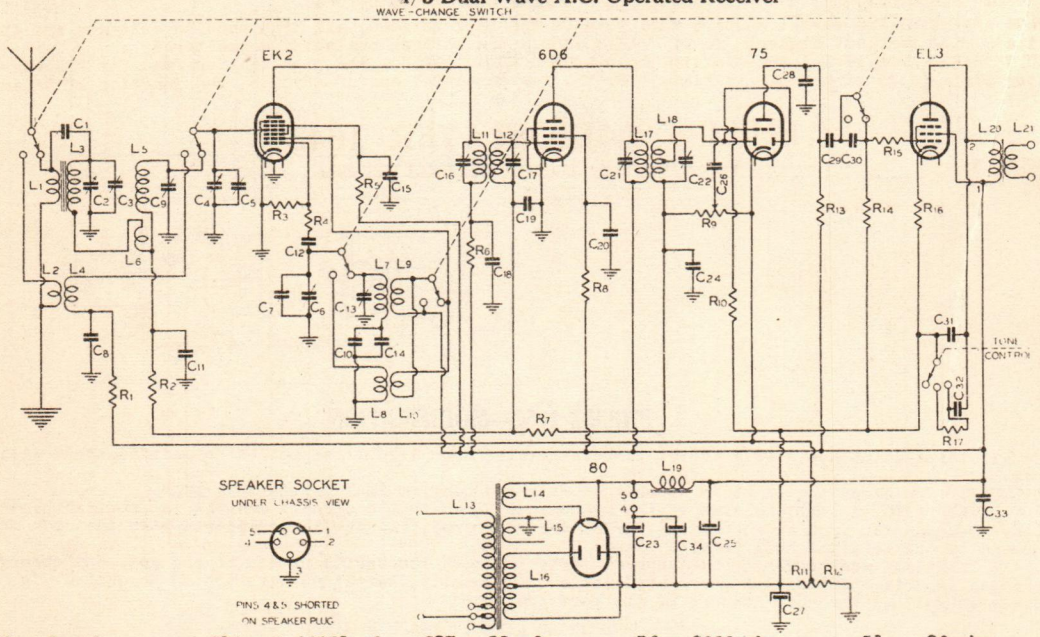
R1 - 5 ohm	R7 - 1 megohm	R13 - 150 ohms	C3 - Tuning Gang	C9 - 100 mmf
R2 - 1 megohm	R8 - ½meg. Pot.	R14 - 100 ohms	C4 - " "	C10- 100 mmf
R3 - 50,000 ohm	R9 - 1 megohm	R15 - 125 ohms	C5 - " "	C11- .01 mf
R4 - 150,000 ohm	R10- ¼ megohm	R16 - 10,000 ohms	C6 - " "	C12- 0-30 mmf
R5 - 10,000 ohm	R11- 1 megohm	C1 - 6 mmf	C7 - " "	C13- 375 mmf
R6 - 60,000 ohm	R12- 50,000 ohm	C2 - 0-30 mmf	C8 - " "	C14 - 0-30 mmf

PHILIPS 1052—MODIFICATION (Contd.)

C15 - 80 mmf
C16 - 0-30 mmf
C17 - 0-30 mmf
C18 - 65 mmf
C19 - .01 mf
C20 - .01 mf
C21 - 80 mmf
C22 - 0-30 mmf
C23 - 0-30 mmf
C24 - 80 mmf
C25 - 100 mmf
C26 - .01 mf
C27 - .01 mf
C28 - .004 mf
C29 - 100 mmf
C30 - 8 mf
C31 - 32 mf
C32 - .05 mf
C33 - 25 mf
C34 - .02 mf
C35 - .006 mf
L1,L2,L3,L4,L5 - Aerial & Bandpass Coils.
L6,L7,L8,L9 - Oscillator Coil
L10 - 1st I.F.T.
L11 - 1st I.F.T.
L12 - 2nd I.F.T.
L13 - 2nd I.F.T.
L14,L15,L16- Power Transformer.
L17,L18,L19,L20 - Speaker and Output Transformer.

PHILIPS 1252

4/5 Dual Wave A.C. Operated Receiver



C1 - 6 mmf
C2 - 9-400 mmf
C3 - 5-30 mmf
C4 - 9-400 mmf
C5 - 3-15 mmf
C6 - 9-400 mmf
C7 - 3-15 mmf
C8 - 0.0045 mf
C9 - 3-30 mmf
C10- 50-100 mmf
C11- 0.05 mf
C12 - 0.0001 mf
C13 - 30 mmf
C14 - 0.00032 mf
C15 - 0.05 mf
C16 - 50-100 mmf
C17 - 50-100 mmf
C18 - 0.02 mf
C19 - 0.05 mf
C20 - 0.05 mf
C21 - 50-100 mmf
C22 - 50-100 mmf
C23 - 8 mf
C24 - 0.0001 mf
C25 - 16 mf
C26 - 0.02 mf
C27 - 25 mf
C28 - 0.0001 mf
C29 - 0.02 mf
C30 - 0.001 mf
C31 - 0.004 mf
C32 - 0.02 mf
C33 - 0.1 mf
C34 - 8 mf
R1 - 0.5M ohm
R2 - 0.5M ohm
R3 - 50,000 ohm
R4 - 50 ohm
R5 - 150,000 ohm
R6 - 5000 ohm
R7 - 1M ohm
R8 - 60,000 ohm
R9 - 0.5M ohm Vol. Control
R10- 1M ohm
R11- 100 ohm
R12- 100 ohm
R13 -250,000 ohm
R14- 1M ohm
R15- 100,000 ohm
R16- 150 ohm
R17- 10,000 ohm
L1 - 20 ohm
L3 - 2.5 ohm
L5 - 3.3 ohm
L7 - 2.5 ohm
L9 - 0.5 ohm
L11 - 9 ohm
L12 - 9 ohm
L13 - 50 ohm
L16 - 540 ohm
L17 - 9 ohm
L18 - 9 ohm
L19 - 1500 ohm
L20 - 600 ohm
L21 - 0.5 ohm

VOLTAGE ANALYSIS:-

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	BIAS VOLTAGE
EK2	205 Osc.P. G2= 215	0.8	45	Across R12 - 1.6
6D6	215	8.0	85	Across R12 - 1.6
75	100	0.3	-	Across R11 - 1.6
EL3	190	33	215	Across R16 6.0
80	-	-	-	-

VALVES: -
EK2 Convertor. 6D6 I.F. 75 det. EL3 - output. 80 rectifier.

COVERAGE: -
540 - 1520 K.C. and 7-22 M.C.

I.F. 472.5 K.C.

SPEAKER: - 1500 ohm field.

PHILIPS 1252-MODIFICATION

IMPORTANT. The changes in code numbers of components and specifications apply to all 1252 Radio-players with serial numbers greater than 4000. In a few specific instances it will be observed that the changes apply exclusively to serial numbers 4001 to 4500 and 6001 to 6300.

In ordering replacement parts, it is essential that these changes be observed. Preferably, the serial number of the set should be quoted as well as the code number of the part concerned.

C23 and C34 are combined in one unit specified as:- C23 & C34 - 16mf.
The unit combining C9 and C10 is replaced by separate condensers:- C9 - 10mmf max.C10-30mmf max.
Additional changes in capacitors:- C13 - 30 mmf max. C14 - 375 mmf.
Trimmers C16 and C21 are separate units:- C16 - 12-170 mmf. C21 - 12-170 mmf

PHILIPS 1252—MODIFICATION (Contd.)

A new value is specified for:- R15 - 50,000 ohm. Additional resistor in series with grid 4 of EK2:- R18 - 50 ohm.

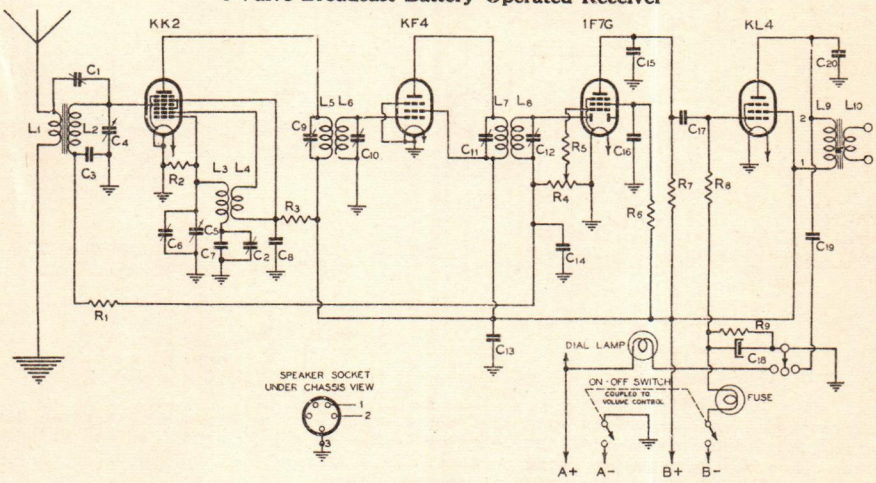
Alternation in intermediate frequency transformers:- L11)- 9 ohms) L17)- 9 ohms)
L12)- 9 ohms) 1st I.F. L18)- 9 ohms)2nd I.F.
C17)- -- C22)- --

Power Transformer alteration:- SERIAL NUMBERS 4001 to 4500 and 6001 to 6300.
L13 - 28 ohms)
L14 - -) Power
L15 - -) Transformer
L16 - 400ohms) All other serial numbers as before.

VOLTAGE ANALYSIS: For serial numbers 4001 to 4500 and 6001 to 6300, all high tension voltages are approximately 10 per cent higher. In all other 1252's the voltage analysis is unaltered.
CIRCUIT CHANGE: For serial numbers 4001 to 4500 and 6001 to 6300, the high tension feed for the oscillator plate (G.2) of the EK2 is taken from the low potential end of R6. i.e. the junction of R6 and C18.

PHILIPS RADIOPLAYER 1643

4-Valve Broadcast Battery Operated Receiver



C1 - 3-30mmf
C2 - 50-100mmf
C3 - 0.05mf
C4 - 15-385mmf Tuning Gang
C5 - " " "
C6 - 5-30mmf Tun.Gang
C7 - 0.00025 mf
C8 - 0.05mf
C9 - 12-170 mmf
C10- 12-170 mmf
C11- 12-170 mmf
C12- 12-170 mmf
C13- 0.25 mf
C14- 0.0001 mf
C15- 0.0001 mf
C16- 0.05 mf
C17- 0.02 mf
C18- 25 mf
C19- 0.006mf
C20- 0.002mf
L1 - 20 ohm
L2 - 2.5 ohm
L3 - 2.9 ohm
L4 - 1.4 ohm
L5 - 9 ohm
L6+C10 - 9 ohm
L7 - 9 ohm
L8+C12- 9 ohm
L9 - 650 ohm
L10- 0.4 ohm
R1 - 1 meg.
R2 - 50,000 ohm
R3 - 50,000 ohm
R4 - 0.5 meg.Vol. Control
R5 - 50,000 ohm
R6 - 1 megohm
R7 - 0.25 meg.
R8 - 1 meg.
R9 - 400 ohm

VOLTAGE ANALYSIS: -

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN VOLTAGE	CONTROL GRID VOLTAGE	FILAMENT VOLTAGE
KK2	130 Osc.P 40V	1.0	35	0	2
KF4	130	2.5	130	0	2
1F7G	30	0.3	-	0	2
KL4	125	6.0	130	5.0	2

VALVES:- KK2 Convertor. KF4 I.F. 1F7G - det. KL4 output.

COVERAGE: - 200 to 550 metres.

CONSUMPTION: "A" = 0.395 amp. approx.
"B" = 14 M/A "

I.F. 472.5 K.C. SPEAKER: Permag.

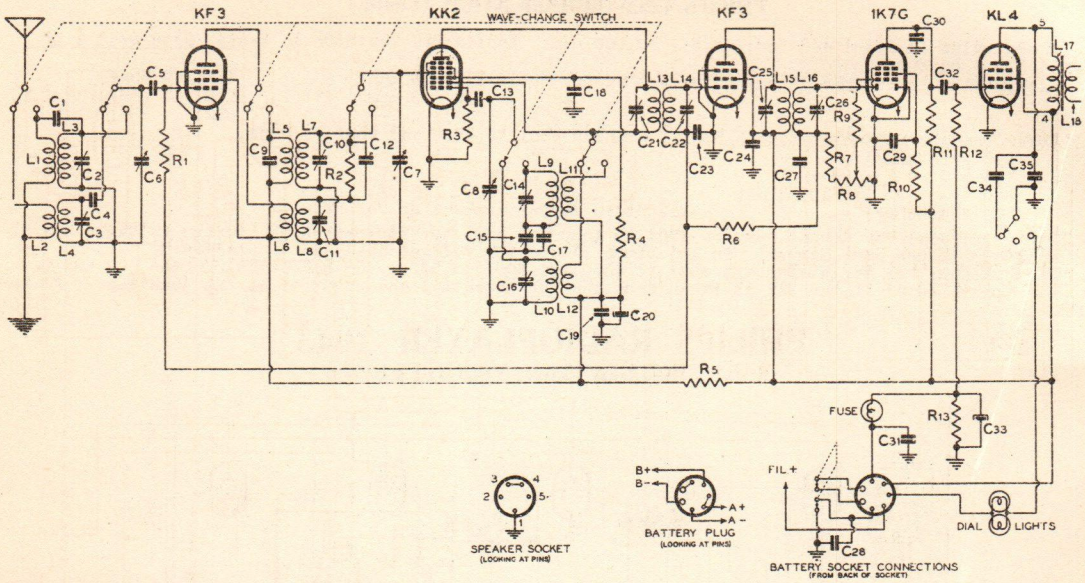
NOTE: The above voltages are for the no-signal condition and are measured with a 1000 ohms per volt voltmeter between the respective valve sockets and the chassis. The grid voltages are measured at the source of potential, and not at the sockets.

PHILIPS 1754

5-Valve Dual Wave Vibrator or Battery Operated Receiver

C1 - 8 mmf
C2 - 2-30 mmf
C3 - 2-30 mmf
C4 - .0045 mf
C5 - 80 mmf
C6 - 9-400 mmf
C7 - 9-400 mmf
C8 - 9-400 mmf
C9 - 30 mmf
C10- 2-30 mmf
C11- 2-30 mmf
C12- .0045 mf
C13- 100 mmf
C14- 2-30mmf
C15- 12-170 mmf
C16- 2-30mmf
C17- 320 mmf
C18- .05 mf
C19- .05 mf
C20- 8 mf
C21- 12-170mmf
C22- 12-170mmf
C23- .05 mf
C24- .1 mf
C25- 12-170 mmf
C26- 12-170 mmf
C27- .0001 mf
C28- .1 mf
C29- .05 mf
C30- .0001 mf
C31- .1 mf
C32- .02 mf
C33- 25 mf
C34- .02 mf
C35- .004 mf
R1 - .5 megohm
R2 - .5 meg.
R3 - .05 meg.
R4 - .05 meg.
R5 - 1500 ohm
R6 - 1.0 meg.
R7 - .05 meg.
R8 - .5meg.Pot.
R9 - .05 meg.
R10- 1.0 meg.
R11- .25 meg.
R12- 1.0 meg.
R13-.400 ohm
L1 - 30 ohm
L3+C2 - 4 ohm
L5 - 60 ohm
L7+C10 - 4 ohm
L9+C14 - 2.5 ohm
L11- .5 ohm
L13- 8 ohm
L14+C22- 8 ohm
L15- 8 ohm
L16+C26 - 8 ohm
L17- 600 ohm
L18- .5 ohm

PHILIPS 1754 (Contd.)



VOLTAGE ANALYSIS:-

VALVE	PLATE VOLTAGE	SCREEN VOLTAGE	BIAS VOLTAGE	FILAMENT VOLTS
KF3 R.F.	120	120	0	2
KK2	120 Osc.P. 120V	60	0	2
KF3	130	130	0	2
1K7G	30	20	0	2
KL4	125	130	5 (Across R13)	2

VALVES:- KF3 R.F. KK2 Convertor. KF3 I.F. 1K7G det. KL4 output.

COVERAGE: 540-1520 K.C. and 7-22 M.C.

CONSUMPTION: "A" = 0.49 amp. WITH VIBRATOR 1.2 amp. at 6 volts.
"B" = 14 M/A approx.

I.F. 472.5 K.C.

NOTE: The abovementioned voltage values with the exception of bias voltages are measured between the socket points indicated and chassis with the receiver in the no signal condition and with the volume control at zero. Bias voltages are to be measured at the source of the voltage, as incorrect readings will otherwise be obtained. Voltages are measured with a 1,000 ohm per volt meter and may vary as much as 10% from the figures quoted.

PHILIPS 6603

5/6 Dual Wave A.C. Operated Receiver with Tuning Eye

C1,C20,C21 - 0.0001 mf Mica
C5,C6,C18 - 0.05 mf paper
C7 - Special cond. located under gang
C8,C13,C14,C16,C17, C19,C23,C25- 0.1mf paper
C12 - 0.0045 mf mica
C15,C32 - 32 mf Elect.
C22,C27,C28, & C33 - 0.02mf Pap.
C24,C30- 25 mf elect.
C26 - 0.25mf pap.
C29 - 0.004mf mica
C31- 16mf elect.
R1,R5 - 50 ohm 1/3W
R2 - 0.5 megohm, 1/3W
R3 - 250 ohm, W/W
R4,R14 - 50,000 ohm 1/3W
R6,R7,R12 - 2 meg. 1/3W
R8,R9 - 50,000 ohm 1 Watt
R10,R11,R18- 5,000 ohm 1 Watt
R13,R16,R17- 1 meg. 1/3 Watt
R15 - 0.5 meg.pot.
R19 - 1,600 ohm 1W
R20 - 1.5 megohm, 1/3 Watt
R21 - 12 ohm, W/W
R22 - 0.25 megohm, 1 Watt
R23- 0.1 megohm, 1 Watt
R24- 25,000 ohm, 1 Watt
R25- 0.1 megohm, 1/3 Watt
R26- 0.25 megohm pot.
R27- 500 ohm 1/3W
R28- 150 ohm W/W
R29- 25,000 ohm voltage divider
R30- 100 ohm W/W

VOLTAGE ANALYSIS: -

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN GRID VOLTAGE	CATHODE VOLTAGE	HEATER VOLTAGE (A.C.)
AK2	230 Osc.Plate G2 = 90V	1.6 mA.	70	1.5(S/W) 0 (B/C)	4.0
AF3	240	8.0 mA.	90	0	4.0
AB2	-	-	-	14	4.0
AF7	110	1.0 mA	110	14	4.0
AL3	230	30 mA.	240	0	4.0
AZ3	-	-	-	-	4.0

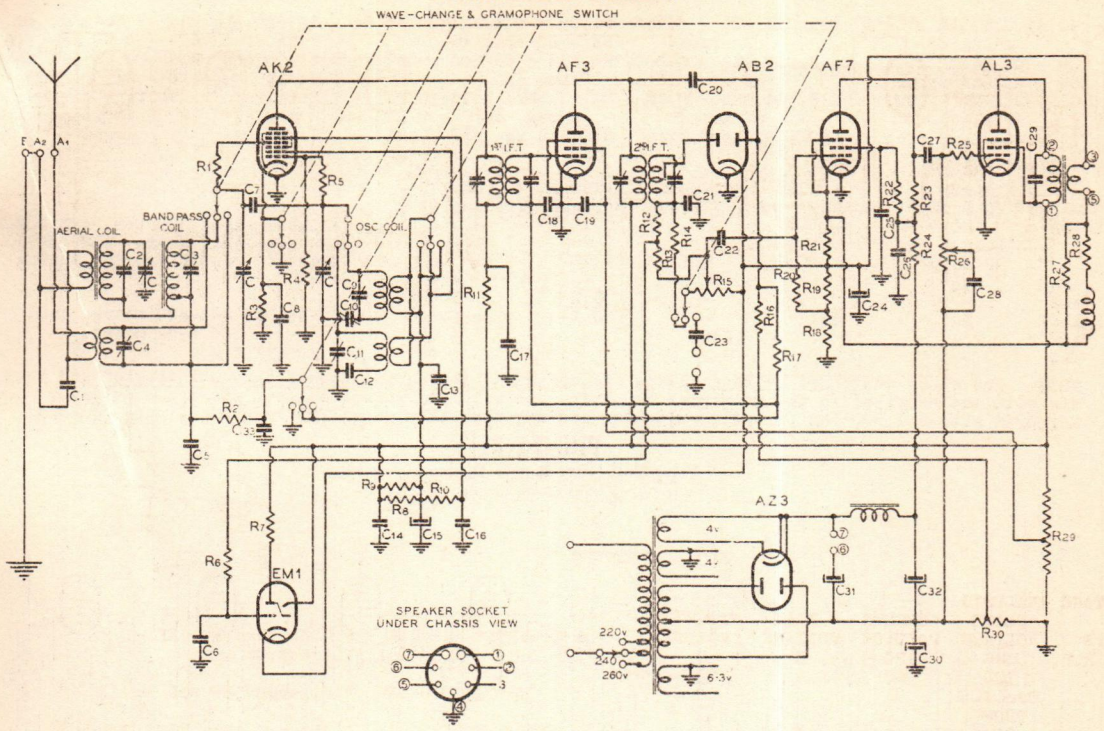
VALVES: AK2 Convertor, AF3 - I.F. AB2 det. AF7 audio. AL3 output. AZ3 rectifier. EM1 tuning eye.

COVERAGE: 200-550 metres. and 16.5-51 metres.

I.F. 472.5 K.C.

NOTE: The above mentioned voltage values are measured between the socket points indicated and chassis with receiver in the no signal condition and with the volume control at zero. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10% from the figures quoted.

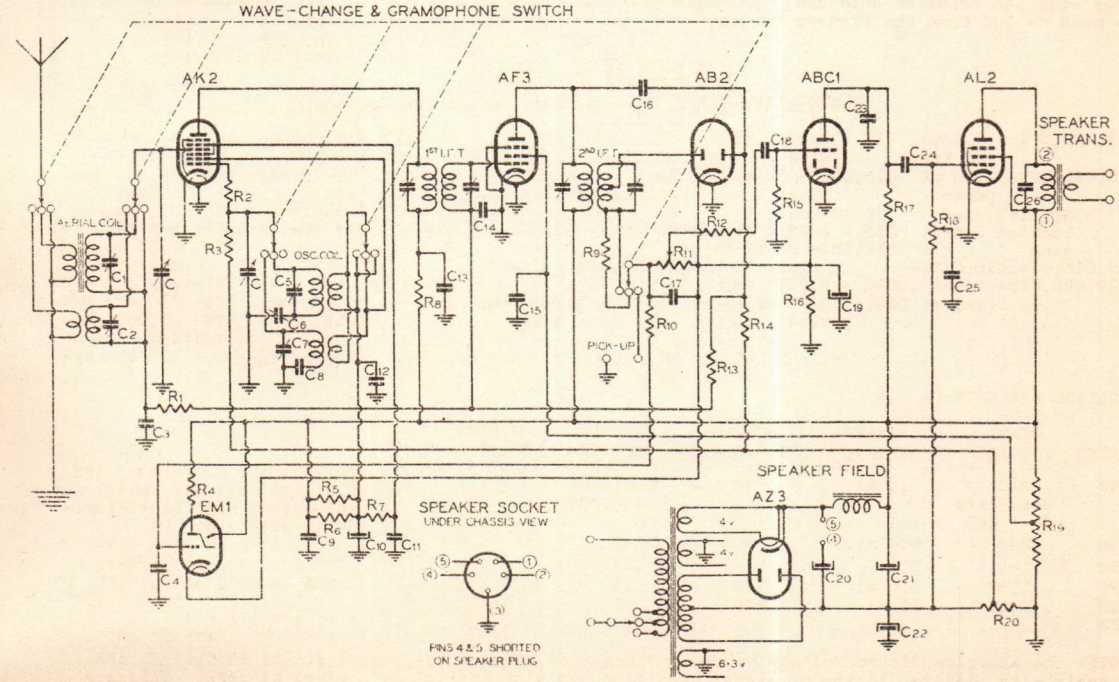
PHILIPS 6603 (Contd.)



PHILIPS 6604 AND 6607

5/6 Dual Wave A.C. Operated Receivers

NOTE:- The 6607 chassis is identical to the 6604 with the exception of the tuning indicator, which has been omitted.



C3,C4,C13,C14 - 0.05 mf Paper
C8 - 0.0045mf mica
C9 - 0.25mf paper
C10,C20,C21 - 16mf elect.
C19,C22- 25mf elec.
C11,C12,C15 - 0.1mf paper
C16,C17,C23 - 0.0001 mf mica
C18,C24,C25 - 0.02 mf paper
C26 - 0.004mf mica
R1,R9 - 0.1meg.⅛W
R2 - 50 ohms ⅛W
R3,R12 - 50,000 ohms ⅛W
R4 (In EM1 holder) 2 meg. ⅛W
R10 - 2 meg. ⅛W
R5,R6 - 50,000 ohm 1W
R7,R8,R16 - 5,000 ohms 1W
R11 - 0.5meg.Pot.
R13 - 1.0 meg.⅛W
R14 - 0.5 meg.⅛W
R15 - 1.5 meg. ⅛W
R17 - 0.25 meg. 1W
R18 - 0.25 meg.pot.
R19 - 25,000 ohms voltage divider
R20 - 350 ohms wire wound

VOLTAGE ANALYSIS.

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN GRID VOLTAGE	CATHODE VOLTAGE	HEATER VOLTAGE (A.C.)
AK2	230 (osc.P G2=80V)	1.5mA	70	-	4.0
AF3	245	8mA	90	-	4.0
AB2	-	-	-	3.2	4.0
ABC1	50	0.75mA	-	3.2	4.0
AL2	230	32	245	-	4.0
AZ3	-	-	-	-	4.0

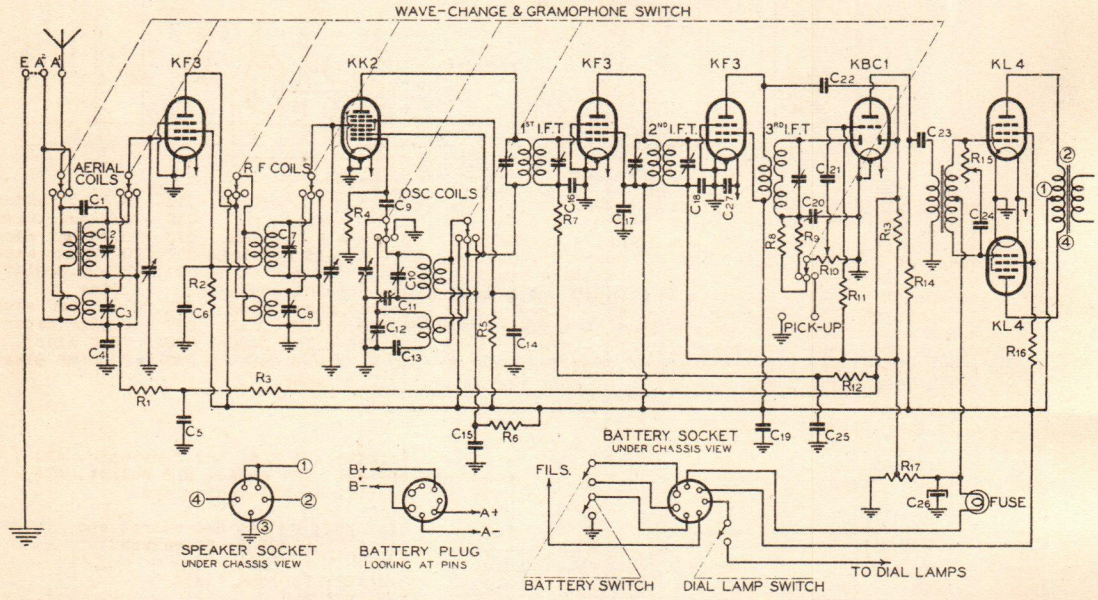
VALVES: AK2 Convertor. AF3 I.F. AB2 det. ABC1 audio. AL2 output. AZ3 rectifier. EM1 tuning eye.

COVERAGE: 200-550 metres and 16.5-51 metres.
I.F. 472.5 K.C.

NOTE: The above mentioned voltage values are measured between the socket points indicated and chassis with the receiver in the no signal condition and with the volume control at zero. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10% from the figures quoted.

PHILIPS 6713

7-Valve Dual Wave Battery Operated Receiver



NOTE: C20 is a trimming condenser mounted in the 3rd I.F. can. This condenser is pre-adjusted at the factory and should not be altered.

C1 - Special condens. inside coil can
C4,C6,C14,C16,C17 & C18 - 0.05mf Paper
C5,C21,C25 - 0.02mf Paper
C9,C22 - 0.0001mf Mica
C13 - 0.0045mf Mica
C15 - 0.1mf Pap.
C19,C27-0.5mf Pap.
C20 - in 3rd I.F. can. See Note
C22 - 0.0001mf Mica
C23 - 0.25mf Pap.
C24 - 0.004mf Mica
C26 - 25mf Elect.
R1,R3,R7,R8,R12 - 0.5 meg. ⅛W
R2,R4,R5,& R9 - 50,000 ohm ⅛W
R6 - 25,000 ohm ⅛W
R10,R15 - 0.5meg.pot.
R11,R13 - 1.0 megohm ½ Watt
R14 - 0.1 meg.⅛ Watt
R16 - 10,000 ohm, ½ Watt
R17 - 400 ohm W/W

VOLTAGE ANALYSIS:-

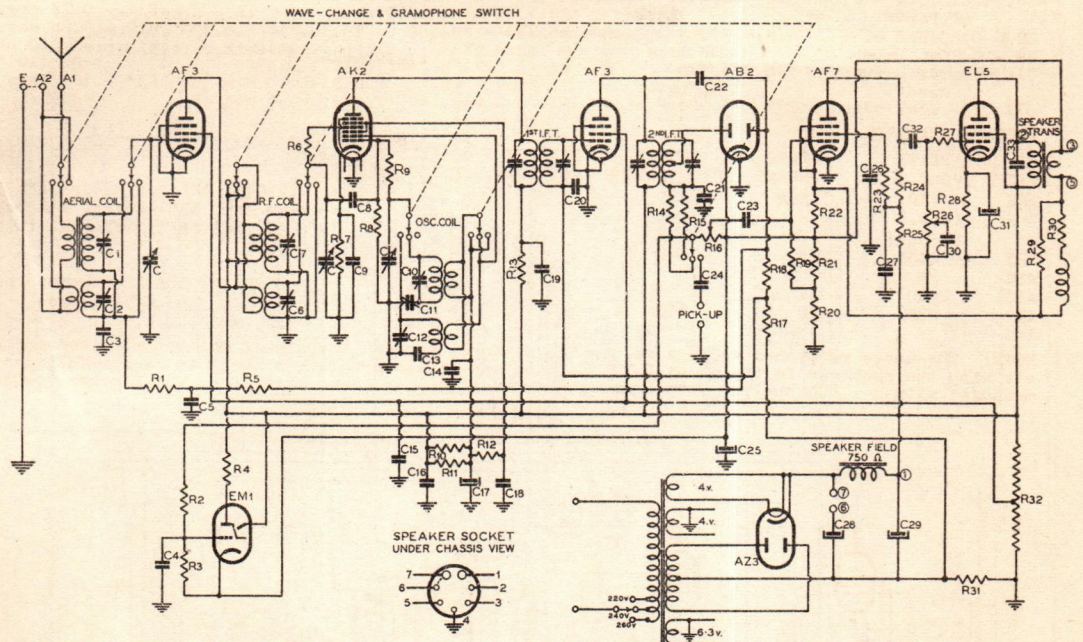
VALVE	PLATE VOLTAGE	PLATE CURRENT (mA)	SCREEN GRID VOLTAGE	CONTROL GRID VOLT.	FILAMENT VOLTAGE
KF3	(B/cast)75	0.5	75	1.5	2
	(S/W) 129	1.5	129		
KK2	)B/cast)55	1.5	50	0	2
	(S/W) 129	2.0	55		
KF3(1st I.F.)	129	2.0	129	1.5	2
KF3(2nd I.F.)	129	2.0	129	1.5	2
KBC1	60	0.7	-	1.5	2
KL4(each valve)	128	2.0	100	6	2

VALVES: KF3 R.F. KK2 Convertor. KF3 I.F. KF3 2nd I.F. KBC1 det. two KL4's in Push Pull
COVERAGE: 200-550 metres and 16.5-51 metres.
CONSUMPTION: "A" = 0.66 amp. approx. "B" = 15 M/A approx.
I.F. 472.5 K.C.

NOTE: The above voltages are for the no-signal condition and are measured with a 1000 ohms. per volt voltmeter between the respective valve sockets and the chassis. The grid voltages are measured at the source of potential, and not at the sockets. Measured voltages may vary, dependent on the condition of batteries.

PHILIPS 6702

6/7 Dual Wave A.C. Operated Receiver with Tuning Eye



R1,R3,R5,R14,R17 - 0.5 meg. ½W
R2,R4 - 2 meg. ½W
R18 - 1meg. ½W
R6,R9 - 50ohm ½W
R7 - 300 ohm ½W
R8 - 50,000ohm ½W
R10,R11,R13 - 50,000 ohm 1W
R12 - 5,000 ohm1W
R15 - 0.1meg. ½W
R16 - 0.5meg.pot.
R19 - 1.5 meg.½W
R20 - 10,000 ohm 1W
R21 - 1,600 ohm 1W
R22 - 27 ohm ½W
R23 - 0.25meg. 1W
R24 - 0.1meg. 1W
R25 - 25,000 ohm 1W
R26 - 0.25meg.pot.
R27 - 2,000 ohm ½W
R28 - 250 ohm 1W
R29 - 500 ohm ½W
R30 - 150 ohm ½W
R31 - 15 ohm W/W
R32 - 25,000 ohm voltage divider
C1 - B/cast aer. trimmer
C2 - S/W aer.trim.
C3,C4,C20,C24,C30- 0.05mf paper.
C5,C23,C32 - 0.02mf paper
C6 - S/W R.F.trimm.
C7 - B/cast R.F.trimmer.
C8 - Special cond. located under gang
C9,C14,C15,C16,C18, C19,C26-0.1mf paper
C10 - B/cast osc. trimmer
C11 - B/cast padder
C12 - S/W osc.trimmer
C13 - 0.0045mf mica
C17,C29 - 32mf elect.
C21,C22 - 0.0001mf mica
C25,C31 - 25mf elect.
C27 - 0.25mf paper
C28 - 16mf elect.
C33 - 0.004mf mica

VOLTAGE ANALYSIS:-

VALVE	PLATE VOLTAGE	PLATE CURRENT	SCREEN GRID VOLTAGE	CATHODE VOLTAGE	HEATER VOLTAGE A.C.
AF3	250	7.5mA	85	0	4.0
AK2	180 (Osc.P. G2=90V)	1.1mA	75	2.2	4.0
AF3	250	7.5mA	85	0	4.0
AB2	-	-	-	17	4.0
AF7	80	1.2mA	65	17	4.0
EL5	240	70mA	250	18	6.3
AZ3	-	-	-	-	4.0

VALVES: AF3 R.F. AK2 Convertor. AF3 I.F. AB2 det. AF7 audio. EL5 output. AZ3 - rectifier. EM1 tuning eye.

COVERAGE: 200 to 550 metres and 16.5 to 51 metres.

SPEAKER: 750 ohm field
I.F. 472.5 K.C.

NOTE: The above mentioned voltage values are measured between the socket points indicated and chassis with the receiver in the no signal condition and with the volume control at zero. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10% from the figures quoted.

PHILIPS 6723

5/6 Dual Wave A.C./D.C. Operated Receiver with Tuning Eye

C1,C2,C3,C23 - 0.01 mica (1500 volts)
C6,C10,C24,C32 - 0.05 paper
C7,C8,C13,C18,C20, C21,C22,C25-0.1pap.
C17-0.0045 mica
C9,C27,C31 - 0.02 paper.
C19,C29,C30 - 32mf elect.
C26 - 0.0001 mica
C28,C33-25mf elect.
R3,R22-0.5meg.½W
R1,R7,R14,R27 -500 ohms ½ Watt
R2,R25 - 100,000 ohms ½ Watt
R4,R5,R6-2meg.½W
R8 - 50,000 ohm ½W
R9 - 50 ohms ½W
R10,R11,R13 - 50,000 ohm 1 Watt
R12 - 5,000 ohm 1W
R15 - 60 ohms W/W
R16,R24 - 0.5meg.pot
R17,R18 - 1.5meg.½W
R19 - 50 ohms 1W
R20-2,500 ohms 1W
R21-1 meg. ½W
R23-100,000 ohm 1W
R26-250 ohm 1W
R28-150 ohm 1W
R29-25,000 ohm Voltage Divider

VOLTAGE ANALYSIS - 240 VOLT A.C. SUPPLY

VALVE	PLATE VOLTS	PLATE CURRENT	SCREEN VOLTS	SCREEN CURRENT	CATHODE VOLTS	HEATER VOLTS
CF2	235	2.8	95	1.5	2.2	13
CK1 Osc.P. 85V 140		0.8	70	2.4	1.6	13
CF2	235	2.8	95	1.5	2.2	13
CBC1	115	1.0	-	-	11.5	13
CL4	225	34.5	235	4.5	9	33
CY2	-	-	-	-	-	30

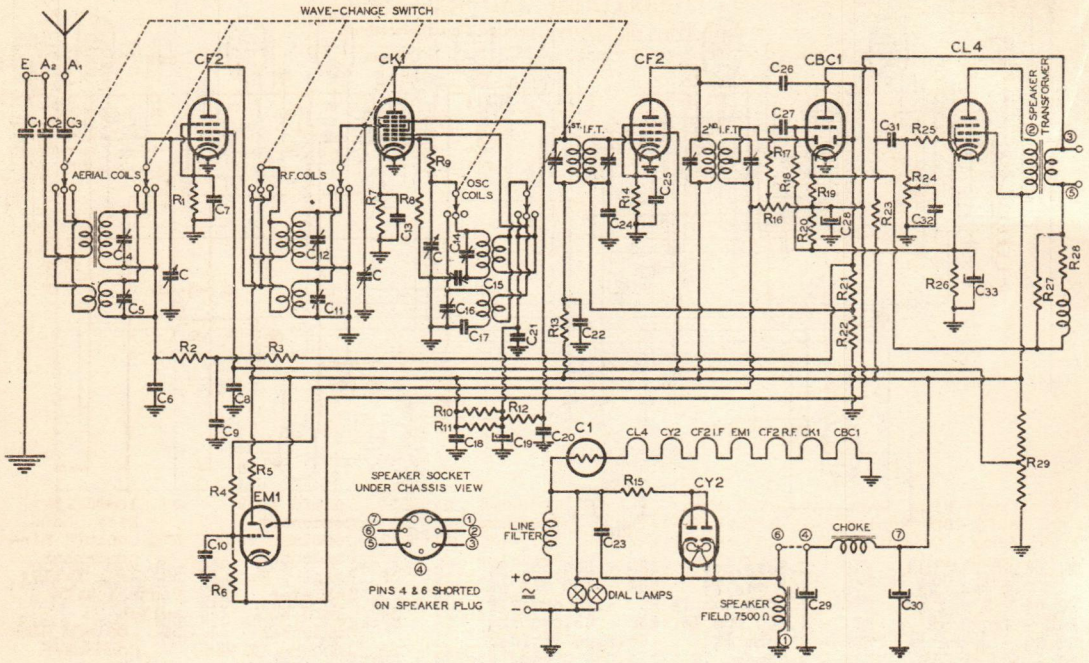
VOLTAGE ANALYSIS - 240 VOLT D.C. SUPPLY

VALVE	PLATE VOLTS	PLATE CURRENT	SCREEN VOLTS	SCREEN CURRENT	CATHODE VOLTS	HEATER VOLTS
CF2	195	2.6	85	1.4	1.5	13
CK1	100 Osc.P 70V	0.7	60	2.2	1.5	13
CF2	195	2.6	85	1.4	1.8	13
CBC1	90	0.8	-	-	7.6	13
CL4	185	27.5	190	3.6	7.6	33
CY2	-	-	-	-	-	30

VALVES: CF2 R.F. CK1 Convertor. CF2 I.F. CBC1 det. CL4 output CY2 rectifier.C1 Barreter. EM1 - tuning eye. COVERAGE: 200-550 metres and 16.5-51 metres. SPEAKER: 7500 ohm field. I.F. 472.5 K.C.

PHILIPS 6723 (Contd.)

NOTE: The foregoing voltage values are measured between the socket points indicated and the chassis with the receiver in the no-signal condition & the vol. control at zero. Voltages are measured with a 1000 ohm per volt meter, and may vary as much as 10% from the figures quoted for the same line voltages. Variations in line voltage or the use of D.C. as an alternative to A.C. will also have some bearing on the measured voltages.



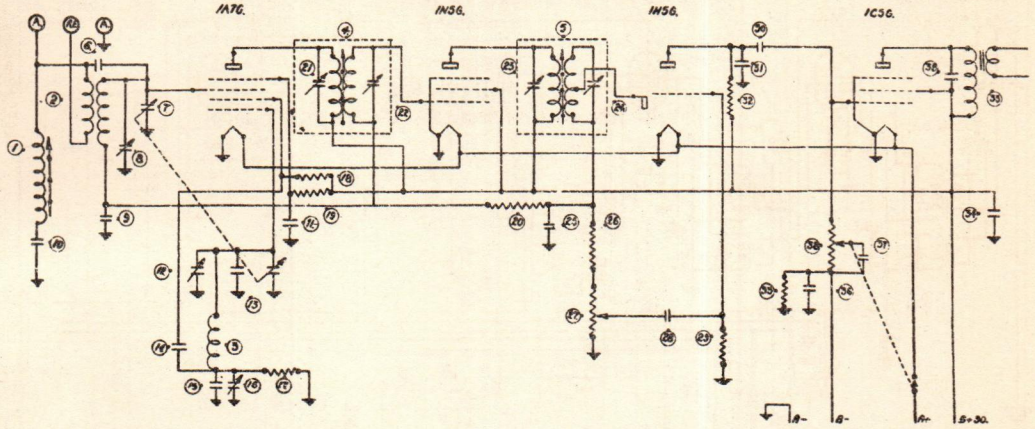
MEMORANDUM

PHILCO RADIO

Manufactu Manufactured by Philco Radio & Television Corporation (Australia) Pty. Ltd., .Ltd.,
Joyn Joynton Avenue, Waterloo, N.S.W.

PHILCO 94B AND 94X

4-Valve, Dry Cell, Battery Operated Superheterodyne



6. 12mmfd Mica Cond.
9. .1mfd 200V Cond.
10. 65mmfd Ceramic Condenser
11. 1mfd 400V Cond.
13. 15mmfd Mica Cond.
14. .0005mfd " "
15. .0004mfd Ceramic Condenser
17. 250T ohms ½ Watt Resistor
18. 10T ohms ½ Watt Resistor
19. 50T ohm ½ Watt Resistor
20. 1 meg. ½ Watt Resistor
25. .00025mfd Mica Condenser
26. 50T ohm ½ Watt Resistor
27. 1meg. Yaxley Control
28. .01mfd 400V Condenser
29. 2meg. ½W Res.
30. .01mfd 400V Condenser
31. .0001mfd Mica Condenser
32. 1meg. ½ Watt Resistor
34. .1mfd 400V Condenser
35. 1000ohm 1W Res.
36. 10mfd 25V Elec. Cond.
37. .001mfd Mica Condenser
38. 1meg Yaxley Control with switch
39. .001mfd Mica Condenser

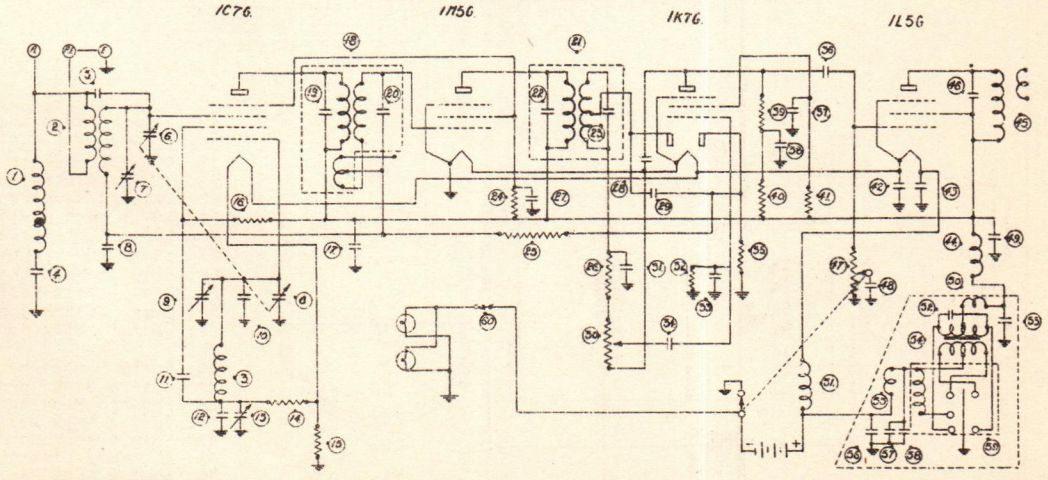
As the use of a pilot light would entail comparatively high drain on the A. Battery compared to that of the filament supply, these models feature the use of a mechanically operated ON and OFF indicator. The battery switch is incorporated with the tone control and is mechanically linked to a rotating drum carrying the word "OFF". The balance of the surface of the drum is coloured red.

POWER SUPPLY - 1 - 1.5 volt cell
2 - 45 "B" Batteries
POWER CONSUMPTION - 9.5 m.a. "B" Supply
250 m.a. "A" Supply
I.F. - 460 k.c.

VALVES USED - 1A7G frequency converter. 1N5G I.F. amplifier. 1H5G second detector, first audio and A.V.C., 1C5G output pentode. COVERAGE - 530 K.C. to 1600 K.C.

PHILCO 94MV AND 94 VB

4-Valve Vibrator Powered Superheterodyne



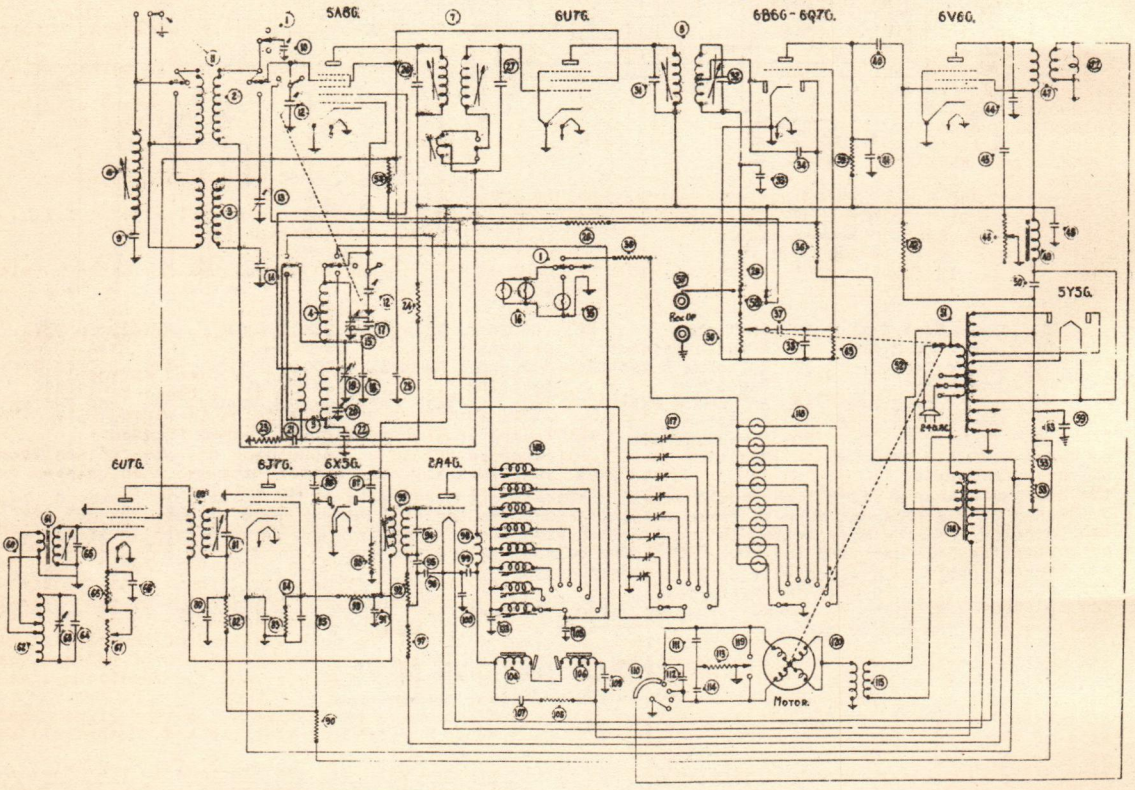
POWER SUPPLY - 6 volt battery COVERAGE - 530-1600 K.C. INTERMEDIATE FREQUENCY - 460 k.c.
VALVES USED - 1C7G frequency converter. 1N5G I.F. Amplifier. 1K7G second detector, first audio and A.V.C. 1L5G output pentode

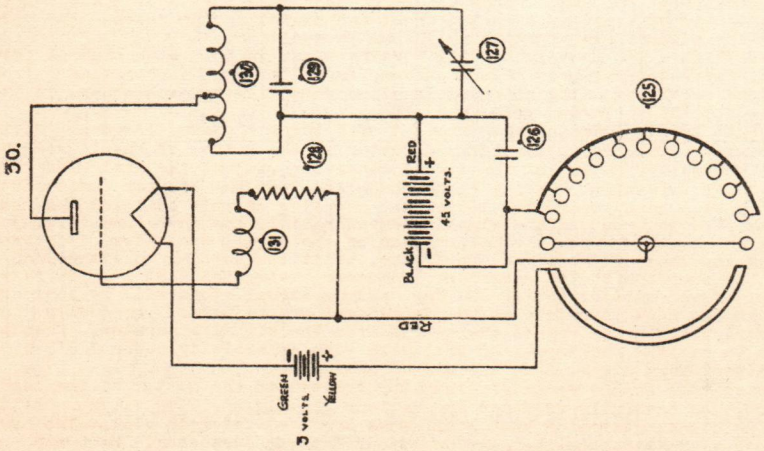
PHILCO 94MV & 94VB (Contd.)

4. 65mmfd Ceramic Condenser
5. 12mmfd Mica Condenser
8. .1mfd 200V Con.
10. 15mmfd Mica "
11. .00025mfd Mica Condenser
12. .0004mmfd Ceramic Condenser
15. 17 ohm 120 m.a. Resistor
14. 50T ½Watt Res.
16. 10T ½Watt Res.
17. .25mfd 300VCon.
24. 20T 1 Watt Res.
25. 1meg. ½ Watt "
26. 100T ohm ½W "
27. .1mfd 400V Con.
28. .00025mfd Mica Condenser
29. " " " " "
30. 1meg. Yaxley Control
31. .00025mfd Mica Condenser
32. 1meg. ½W Res.
33. .0001mfd Mica Condenser
34. .01mfd 400V Condenser
35. 1meg. ½W Res.
36. .01mfd 400V Condenser
37. .05mfd 200V Condenser
38. .25mfd 300V Condenser
39. 250T ½W Res.
40. 50T ½W Res.
41. 1meg. ½W Res.
42. 200mfd 8V Elec.Cond.
43. 500mfd 12V Condenser
46. .004 Mica Con
47. 500T Yaxley Cont. with switch
48. .006mfd 200V Cond.
49. 8mfd 350V Elect.
52. .005mfd Mica Condenser
53. 4mfd 350V Electrolytic Condenser
56. .001mfd Mica Condenser
57. .5mfd 400V Cond.
58. .001mfd Mica Cond.

PHILCO 908

10-Valve A.C. Operated Superheterodyne (Mystery Control)





CONTROL UNIT

9. 65mmfd Ceramic Condenser
14. .1mfd 200V Condenser
17. 12mmfd Mica Condenser
18. 400mmfd Ceramic Cond.
21. 1000mmfd Mica Cond.
22. .004mfd Ceramic Cond.
23. 50T ½ Watt Resistor
24. 25T 1 Watt Resistor
25. .1mfd 400V Condenser
28. 1meg. ½ Watt Resistor
29. 100T ½ Watt Resistor
30. 1meg. Volume Control
33. 250mmfd Mica Condenser
34. " " " "
36. 6 ohm Resistor
37. .01mfd 400V Condenser
38. 100mmfd Mica Condenser
39. 250T ½ Watt Resistor
40. .01mfd 400V Condenser
41. 1000mmfd Mica Condenser
42. 500T ½ Watt Resistor
43. 5 meg. 1 Watt Resistor
44. .006 600V Condenser
45. .05mfd 400V Condenser
46. 50T Tone Control

48. 8mfd Regulating type Elec.Con.
50. 8mfd elec.Con.
53. Bias Resistor
54. 25T 1Watt Res.
56. 1meg.½Watt "
59. 4mfd elec.Con
62. Secondary Inductor (Loop) complete
63. Padder Inductor (Loop)
64. 100mmfd Silvered Mica Cond.
65. Silvered Mica Condenser
66. 300ohm 1W Res.
67. 50T Variable Sensitivity Cont.
68. .05mfd 200V Condenser
80. .05mfd 200V Condenser
81. Ceramic Condenser
82. 1meg. ½ Watt Resistor
83. .05mfd 200V Condenser
84. 100T ½W Res.
85. .05mfd 200V Con
86. .02mfd 400V "
87. 500mmfd Mica Condenser
88. 1meg.½W Res.
89. 100T " "
90. 1meg. " "
91. .1mfd 400VCon.
92. 5T ½W Res.
94. Ceramic Con.
95. .25mfd 300V "
96. .1mfd 200V "
97. 50T ½W Res.
99. .05mfd 200V "
100. .05mfd " "
101. Automatic Osc Coil LOW "L"
102. Automatic Osc. Coil HIGH "L"
103. 375mmfd Silvered Mica Cond.
104. Holding Relay
105. 375mmfd Silvered Mica Cond.
106. Driving Relay
107. 16mfd 200V Elect. Cond.
108. 150 ohm Res
109. .05mfd 400V Condenser
111. .1mfd 400V Condenser
113. 150 ohm Res.
112. 30mfd 36V 50 cycle Elec.Cond.
114. .1mfd 400V Cond
126. .05mfd 200V Condenser
127. 55mmfd Trimmer Condenser
128. 500 ohm ½W Res.
129. 250mmfd Silvered Mica Cond.
130. Pulser Inductance Secondary
131. Pulser Inductance Primary
132. Combined A and B Battery

In addition to providing conventional operation, this model incorporates the newly developed Philco Mystery Control for Electric Automatic Tuning of eight (8) stations.
POWER CONSUMPTION: Normally operated - 75 watts. With Mystery Control in operation 115 watts. With set switched off - 1/4 watts.
It should be noted that when receiver is switched off, the small transformer used for energising the volume control motor is left permanently across the line. Owners should be instructed that set should be switched off at power when out of use for long periods.
INTERMEDIATE FREQUENCY - 460 k.c. SPEAKER FIELD - 200 ohms.
VALVES USED - RECEIVER: 6A8G Frequency Converter. 6U7G I.F. Amplifier. 6B6G-6Q7G Second Detector. First Audio and A.V.C. 6V6G Output Pentode. 5Y3G Rectifier.
MYSTERY CONTROL AMPLIFIER: 6U7G First Control Amplifier. 6J7G Second Control Amplifier. 6X5G A.V.C., Noise Limiter. 2A4G Thyratron Rectifier. MYSTERY CONTROL UNIT: 1 type 30.
AUDIO OUTPUT - 4.25 watts.
The power supply for the Mystery Control Unit is obtained from a specially designed dry battery unit, replacements of which may be obtained from any Philco distributor.
COVERAGE - 530 K.C. to 1600 K.C. and 5.7 M.C. to 18 M.C.

ADJUSTING MYSTERY CONTROL FOR RECEPTION OF STATIONS: To set up stations on Mystery Tuning proceed as follows:-
1. Select and remove the desired eight station call letters from the Station tab card as supplied with the receiver. Unscrew the main escutcheon from the receiver panel and slide these tabs into the slots behind call sign escutcheon so revealed. The lowest frequency station is placed in the first window on the left, and the remaining station tabs in the order of increased frequency.
2. Now insert the small call letter tab in the third aperature, i.e., adjoining the "soft" position of the bezel on the remote Mystery Control Unit. The remaining call letter tabs are then placed in the order of increasing frequency around the bezel from right to left (counter-clockwise).
3. Switch wave change switch to manual position and tune in the station corresponding to the first tab inserted at the low frequency end of the dial. Switch to Mystery position and dial this station on control box. Using a padding screwdriver, adjust the first 530-850 k.c. oscillator padder (bottom row of holes) at the rear of the chassis, until the station desired is correctly tuned in. Be very sure that this operation is done very accurately and that the fundamental signal from the station is tuned. Next, adjust the corresponding trimmer above the oscillator trimmer for maximum signal. This last operation should be done with the volume control adjusted for low volume.
This procedure is repeated for each of the remaining stations. The next station, of course, will be the next highest in frequency, that is within the 530-850 k.c. range of the second set of padders. The third station is adjusted to the third set of padders covering 620-1040 k.c. and the remaining stations in the order of increasing frequency.
4. Insert "loud" and "soft" tabs in the first and second apertures respectively on the right hand side of the bezel. See instructions supplied with each model for dialing stations and controlling volume.
NOTE: Ten (10) clear celluloid tabs and a paper sheet printed with all the stations in the Commonwealth are supplied with each receiver. The stations desired, together with the "loud" and "soft" tabs, should be cut with a small pair of scissors from the sheet and placed in the recess in the bezel and the clear celluloid tabs snapped over them to hold them in position.
ADJUSTING CONTROL FREQUENCY AMPLIFIER - The Mystery Control Receivers are shipped with control frequency amplifier set at 375 k.c. Provision has been made, however, for altering the operating frequency in the event of one or more receivers being operated in close proximity to each other. In this event it will be necessary to adopt the following procedure: -
1. Take a roughtcoil of wire about 12" in diameter with about 4 or 5 turns of, say, 16 gauge Cotton Covered wire and place in proximity of the large secondary inductor in the bottom of the receiver cabinet, and connect this coil across the output of the signal generator. Adjust the dial of the signal generator to 375 k.c. and at this point a click should be heard from the stepper unit and the thyratron valve will glow with a blue haze. Gradually loosen the coupling of this coil and the secondary inductor until even with re-adjustment on the signal generator dial, the thyratron valve just fails to fire. This point will establish whether the calibration of the signal generator is correct. Having established the relative accuracy of the signal generator, shift its setting to either 365 k.c. or 385 k.c. and increase the coupling to the secondary, inductor, using the 2A4G Thyratron valve as a resonance indicator, adjust padders (61-69-93) for maximum signal. This will be indicated by the brilliance of the glow in the 2A4G Thyratron valve. As padders are adjusted, gradually turn sensitivity control to the "near" position or reduce the output from the signal generator. When the padders are correctly adjusted to maximum the Thyratron will glow with sensitivity control (67) at the "near" position and with a very weak signal from the signal generator.
2. Next, adjust padding condenser (63) on the secondary inductor located in the bottom of the cabinet. This padding condenser should be carefully adjusted for maximum glow in the 2A4G valve. Use the weakest signal possible from the signal generator that will cause the 2A4G valve to glow, also have the sensitivity control as close as possible to the near position. Extreme care should be used in

adjusting the padder to the exact point of resonance as the secondary inductor is a very sharply tuned circuit. After adjusting the circuit remove signal generator and loop from the receiver.

3. THE MYSTERY CONTROL UNIT IS NOW ADJUSTED AS FOLLOWS:-

(a) Dial anyone of the stations indicated on the remote unit by pulling the selector to the "stop" position. Then, as the dial is released at the "stop", press the stop down and hold it in this position.

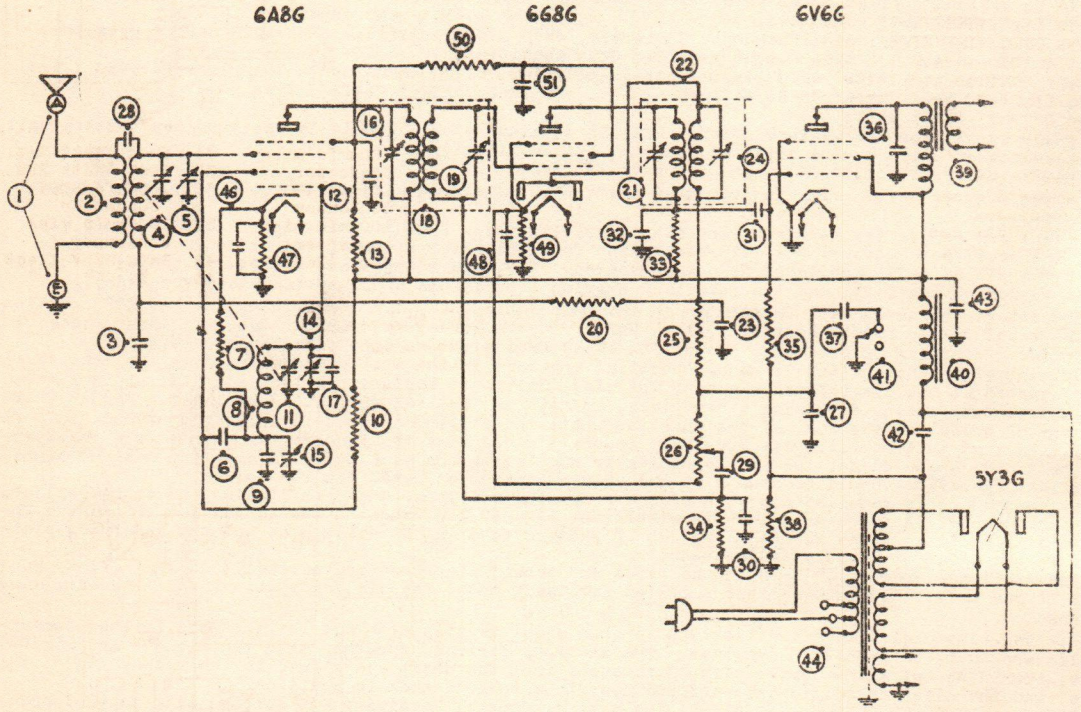
(b) Holding the "stop" in this position, bring the Mystery Control Unit close to the receiver. Using the padding screwdriver tune the padding screw (127) located at the bottom of the unit until the 2A4G thyratron in the receiver glows at full brilliance. Now, with sensitivity control on the receiver at the "near" position, and with an observer stationed at the receiver, walk away from the set, and at the same time rock trimmer screw over glow point on Thyratron until a distance is reached where it is no longer possible, even with the most minute adjustments to cause the Thyratron to glow.

In the event of an observer not being handy, it is possible to perform this operation while listening for the click of the relay in the stepper unit.

If extreme range is required, the set and secondary inductor may be finally adjusted to the frequency of Control Unit by having an assistant slowly walk away from the receiver with this unit radiating. The padders on the Control Amplifier and Secondary inductor may then be adjusted for their most sensitive position.

PHILCO 940

4-Valve A.C. Operated Superheterodyne

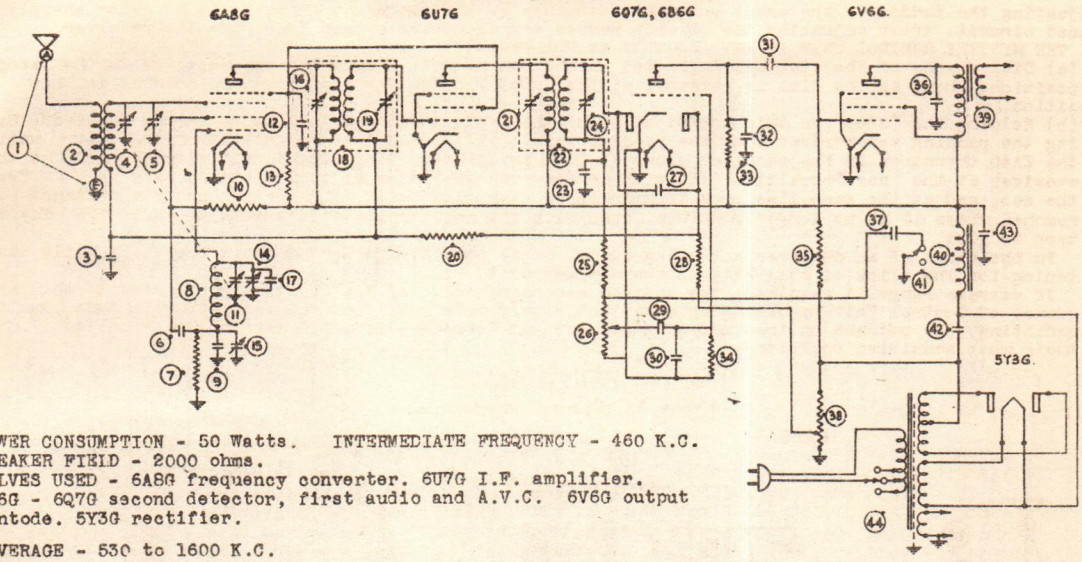


This receiver utilises the reflex principle.
POWER CONSUMPTION - 45 Watts. INTERMEDIATE FREQUENCY - 460 K.C. SPEAKER FIELD - 2000 ohms.
VALVES USED - 6A8G frequency converter, 6G8G first I.F. amplifier, second detector, first audio & A.V.C. 6V6G output pentode, 5Y3G rectifier.
COVERAGE - 530 to 1660 K.C.

3. .1mfd 200V Condenser
6. 250mmfd mica condenser
7. 50T ⅛ Watt Resistor
9. 415mmfd mica Condenser
10. 25T ½ Watt Resistor
12. .1mfd 400V Condenser
13. 25T 1 Watt Resistor
17. 25mmfd mica Condenser
20. 1meg. ½ Watt Resistor
23. 100mmfd mica Condenser
25. 100T ½ Watt Resistor
26. 500T Volume Control
27. 100mmfd Mica Condenser
28. 7mmfd Mica Condenser
29. .01mfd 400V Condenser
30. 100mmfd Mica Condenser
31. .01mfd 400V Condenser
32. 400mmfd Mica Condenser
33. 100T ½ Watt Resistor
34. 500T ½ Watt Resistor
35. 500T ½ Watt Resistor
36. .006mfd Condenser
37. 1000mmfd Mica Condenser
42. 8mfd 525V Electrolytic Condenser
43. 8mfd 525V Electrolytic Condenser
46. .05mfd 200V Condenser
47. 500 ohms ½ Watt Resistor
48. 10mfd Elect. Condenser
49. 2000 ohms ½ Watt Resistor
50. 100T ½ Watt Resistor
51. .1mfd 400V Condenser

PHILCO 950

5-Valve A.C. Operated Superheterodyne



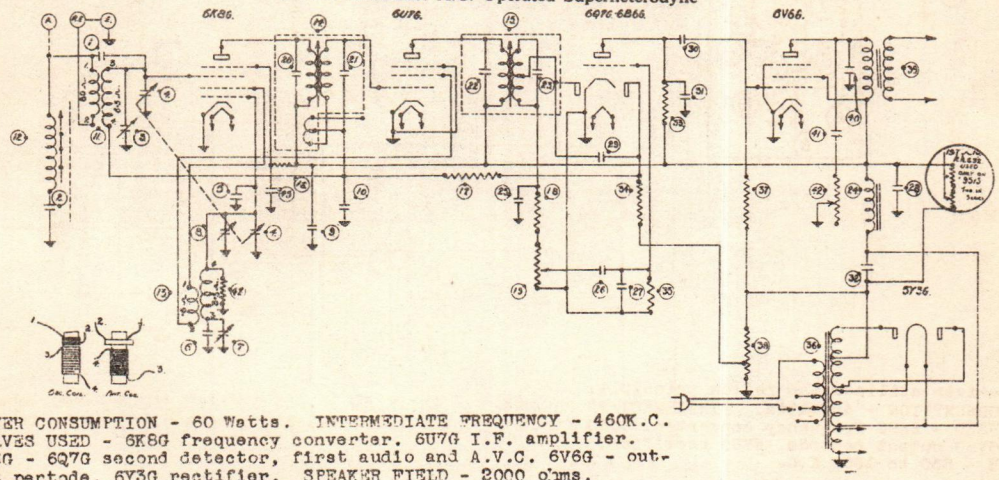
POWER CONSUMPTION - 50 Watts. INTERMEDIATE FREQUENCY - 460 K.C.
SPEAKER FIELD - 2000 ohms.
VALVES USED - 6A8G frequency converter. 6U7G I.F. amplifier. 6B6G - 6Q7G second detector, first audio and A.V.C. 6V6G output pentode. 5Y3G rectifier.

COVERAGE - 530 to 1600 K.C.

3. .1mfd 200V Condenser
6. 400mmfd mica condenser
7. 50T ½Watt Res.
9. 415mmfd mica Condenser
10. 25T ½Watt Res.
12. .1mfd 400VCon.
13. 25T 1Watt Res.
17. 25mmfd mica Condenser
23. 250mmfd mica Condenser
20. 1meg. ½Watt Res.
25. 100T ½Watt Res.
26. 500T Vol.Cont.
27. 100mmfd mica Condenser
28. 1meg. ½Watt Res
29. .01mfd 400V Con.
30. 100mmfd mica Condenser
31. .01mfd 400V Condenser
32. 100mmfd mica condenser
33. 250T ½Watt Res.
34. 5meg.1Watt Res.
35. 500T ½Watt Res.
36. .006mfd 600V Condenser
37. 1000mmfd mica condenser
42. 8mfd 525V Elect.
43. " " "

PHILCO 951S, 952S, 951 AND 952

5-Valve Broadcast A.C. Operated Superheterodyne

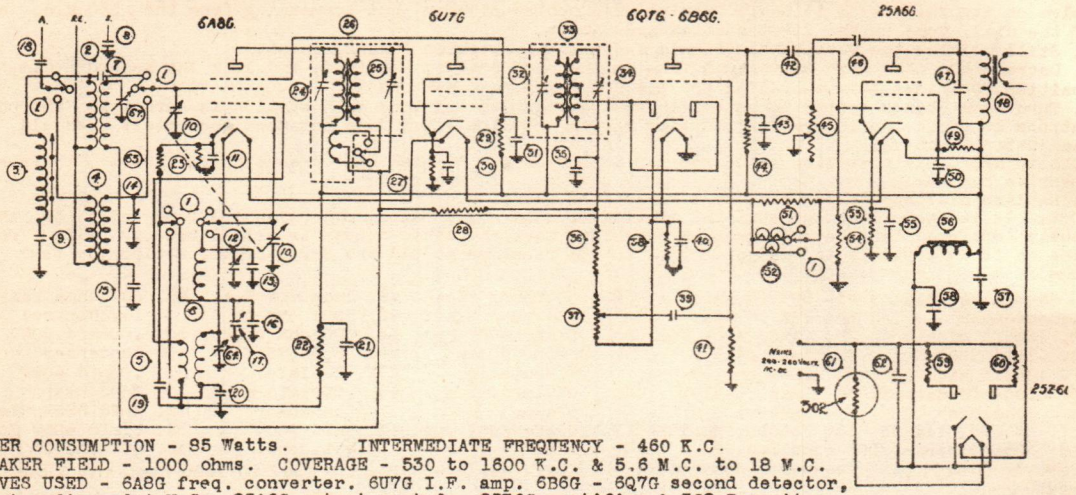


POWER CONSUMPTION - 60 Watts. INTERMEDIATE FREQUENCY - 460K.C.
VALVES USED - 6K8G frequency converter. 6U7G I.F. amplifier. 6B6G - 6Q7G second detector, first audio and A.V.C. 6V6G - output pentode. 5Y3G rectifier. SPEAKER FIELD - 2000 ohms.
COVERAGE - 530 K.C. to 1600 K.C.

1. 12mmfd Mica Con.
2. 65mmfd Ceramic Condenser
5. 15mmfd Mica Con.
6. .0004mfd Ceramic Cond. (Model 951S - 952S only) .00041S mfd Ceramic Cond. (Model 951-952 only
9. .1mfd 400V Cond.
10. .1mfd 200V "
16. 15000T ohm 1 Watt Resistor
17. 1meg. ½Watt Resistor
18. 100T ohm ½ Watt Res.
19. 500T ohm Vol. Cont.
24. Speaker Field 2000 ohm
25. .00025mfd mica Cond.
26. .01mfd 400V Cond.
27. .0001mfd mica Condenser
28. 8mfd 525V tubular Cond. (Electrolytic) (Model 951S only)
29. .00025mfd Mica Cond.
30. .01mfd 400V Condenser
31. .0001mfd Mica Cond
32. 8mfd Elect. 500V Cond.
33. 250T ohms ½Watt Res.
34. 1meg. ½ Watt Res.
35. 5meg.1W Res.
37. 500T ohm ½Watt Res.
38. 200 ohm W/W 70 M.A. Res. tapped 50
40. .006mfd 600V Condenser
41. .05mfd 400V Cond.
42. 50T ohm Tone Control
45. .1mfd 400V Cond.
46. 8mfd 325V Regulating type Elect. Cond. (not on 951S)
47. 50T ohm ½ Watt Resistor

PHILCO 953U, 954U

5-Valve A.C. or D.C. Operated World Range Superheterodyne

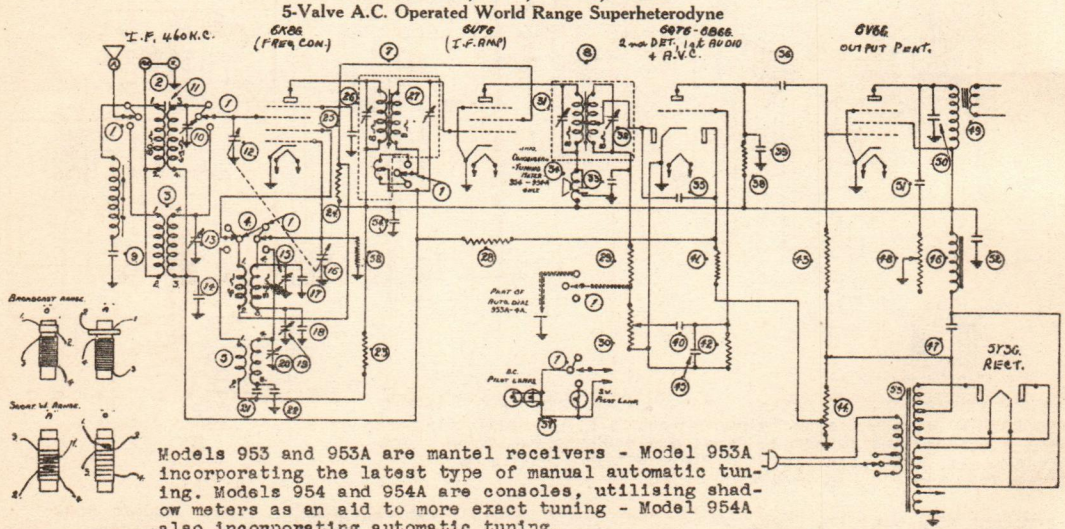


POWER CONSUMPTION - 85 Watts. INTERMEDIATE FREQUENCY - 460 K.C.
SPEAKER FIELD - 1000 ohms. COVERAGE - 530 to 1600 K.C. & 5.6 M.C. to 18 M.C.
VALVES USED - 6A8G freq. converter, 6U7G I.F. amp. 6B6G - 6Q7G second detector, first audio and A.V.C., 25A6G output pentode. 25Z6G rectifier & 302 Barretter.

7. 12mmfd mica Cond.
8. .01mfd 400V Cond.
9. 65mmfd ceramic
11. .05mfd 200V Con.
13. 15mmfd mica Con.
15. .1mfd 200V Cond.
16. .0004mfd ceramic Cond.
18. .003mfd "Cond.
19. .001mfd mica "
20. .004mfd ceramic Condenser
21. .1mfd 400V Con.
22. 25T ½Watt Res.
23. 980 ohm tapped 280 20M.A. Resis.
27. 980 ohm tapped 280 M.A. Resis.
28. 1meg. ½W Res.
29. 25T 1Watt Res.
30. .05mfd 200V Cond.
31. .1mfd 400V Cond.
35. .00025mfd mica Condenser
36. 50T ohm ½W Res
37. Yaxley 1meg. Control
38. 5000T ohm ½W Res
39. .01mfd 400V
40. 10mfd 25V Elec. Condenser
41. 1meg. ½W Res.
42. .01mfd 400V Con.
43. .0001mfd mica "
44. 250T ohm ½W Res
45. 50T ohm Yaxley Control
46. .05mfd 400V Con
47. .006mfd 600V "
49. 5000T ohm ½WRes
50. .1mfd 400V Con.
51. 150 ohm 300 M.A. Resistor
53. 450 ohm 40 M.A. Resistor
54. 500T ohm ½W Res
55. 10mfd 25V Elect. Condenser
57. 8mfd 500V Elect. Condenser
58. 8mfd 500V Elect. Condenser
59. 100 ohm ½W Res.
60. 100 ohm ½W Res.
62. .05mfd 400V Condenser
63. 50T ohm ½ Watt Resistor

PHILCO 953, 954, 953A, 954A

5-Valve A.C. Operated World Range Superheterodyne



Models 953 and 953A are mantel receivers - Model 953A incorporating the latest type of manual automatic tuning. Models 954 and 954A are consoles, utilising shadow meters as an aid to more exact tuning - Model 954A also incorporating automatic tuning.

SETTING UP AUTOMATIC TUNING MECHANISM - Models 953A and 954A feature the most modern type of manually controlled Automatic tuning. In order to minimise mis-tuning due to station and calibration drift, the receiver is made less selective when switched to automatic tuning. The normal finger tip tuning control is also disengaged, when the switch is in this position.

To set up this tuner proceed as follows:-

1. Switch on receiver and allow it to operate for at least half an hour, on any station before commencing to adjust.
2. Unscrew the small wood-screws from the dial escutcheon (not push button escutcheon) and remove it from the front of cabinet.
3. With the wave-change switch in normal broadcast position, slacken the locking screws in the face of each brass selector cam with a long bladed screw-driver.
4. Depress the first push button at the left hand end to its full extent (the loosened cam will re-

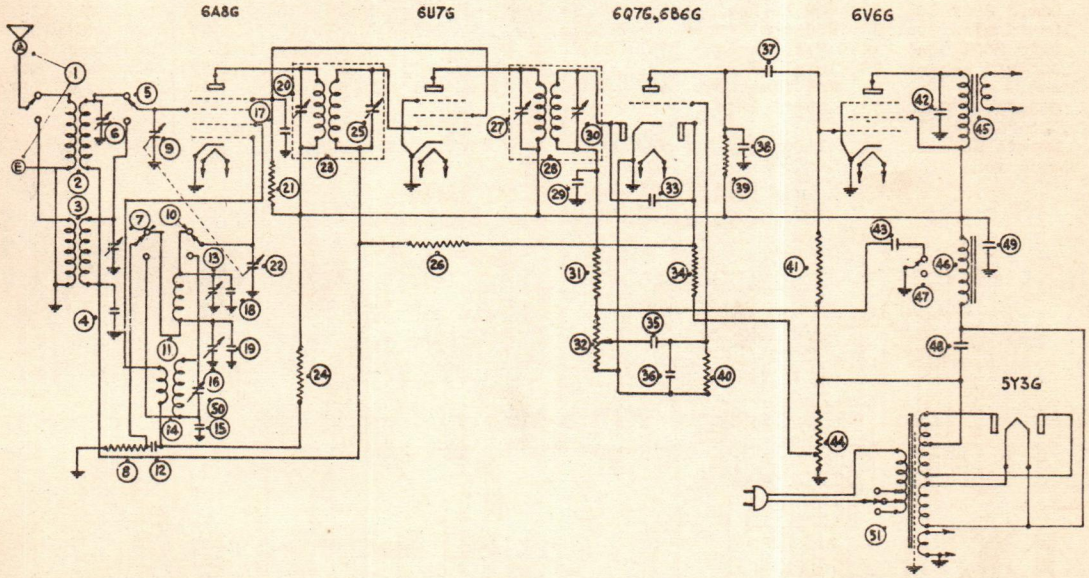
volve on its shaft till it meets face of push button plunger) and commencing from the 550 k.c. end of the dial, tune in the first station accurately.
5. Still holding the push button firmly against cam, tighten locking screw.
6. Depress the next push button and tune in the next station required, and lock the second cam in position. Continue this operation for the remaining push buttons.
7. Turn wave-change switch to automatic tuning position and tune each station in turn with the push buttons to check the accuracy of setting up. Any station which does not tune accurately should be readjusted as above.
8. Slip appropriate station indicator tab into recesses of push button escutcheon above their respective buttons.
9. Replace dial escutcheon plate and screw into position.
NOTE: It is most important that the station be accurately tuned, otherwise the tone will be seriously impaired. Extreme care must be exercised that the screw-driver is not allowed to slip from cams as it is possible to damage portion in the receiver should the screw-driver accidently foul them.

9. 65mmfd Ceramic Condenser
11. 15mmfd mica Con.
14. .1mfd 200V Con.
17. 12mmfd Mica Con.
18. .0004mfd ceramic Condenser
21. .001mfd Mica Con
22. .004mfd Ceram. "
23. 50T ½W Res.
24. 25T 1W Res.
25. .1mfd 400V Con
28. 1meg. ½W Res.
29. 100T ohm ½W Res
30. 1meg. Yaxley Control
33. .00025mfd mica Condenser
35. .00025mfd Mica Condenser
36. .01mfd 400V Con
38. 250,000T ohm ½W Resistor
39. .0001mfd mica trimmer
40. .01mfd 400V Con
41. 1meg. ½W Res.
42. 5meg. ½W Res.
43. 500T ohm ½W "
44. 200 ohm tapped 25,50,75,70 M.A. Resistor
45. .001mfd mica Condenser
47. 8mfd 500V Elect.Cond.
48. 50T ohms Yaxley Control
50. .006mfd 600V Condenser
51. .05mfd 400V Condenser
52. 8mfd 325V Elec.
54. .1mfd 400V Con.
58. 50T ohm ½W Res.

POWER CONSUMPTION: 60 Watts. SPEAKER FIELD: 2000 ohms COVERAGE: 530 K.C. to 1600 K.C. and 5.6mc to 18 m.c.

PHILCO 959

5-Valve A.C. Operated World Range Superheterodyne



POWER CONSUMPTION - 50 watts. SPEAKER FIELD - 2000 ohms. INTERMEDIATE FREQ. - 460 K.C.

VALVES USED - 6A8G frequency converter. 6U7G I.F. amplifier, 6B6G or 6Q7G - second detector, first audio and A.V.C. 6V6G output pentode. 5Y3G rectifier.

COVERAGE - 530 to 1600 K.C. and 5.6 M.C. to 18 M.C.

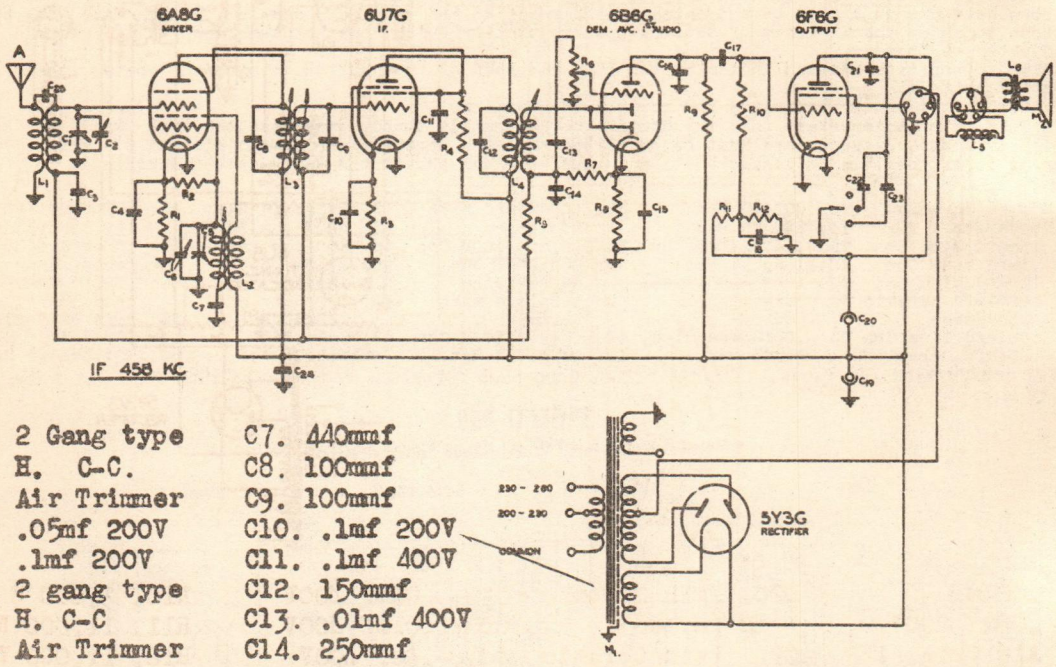
4. .1mfd 200V coil
12. 400mmfd mica condenser
15. .004mfd mica condenser
17. .1mfd 400V condenser
18. 15mmfd condenser
19. 400mmfd mica condenser
21. 25T 1 Watt Resistor
24. 25T ½ Watt Resistor
26. 1 meg. ½ Watt Resistor
29. 250mmfd mica condenser
31. 100T ½ Watt Resistor
32. 500T volume control
33. 100mmfd mica condenser
34. 1 meg ½ Watt Resistor
35. .01mfd 400V Condenser
36. 100mmfd mica condenser
37. .01mfd 400V condenser
38. 100mmfd mica condenser
39. 250T ½ Watt Resistor
40. 5 meg. 1 Watt Resistor
41. 500T ½ Watt Resistor
42. .006mfd 600V Condenser
43. 1000mmfd mica condenser
48. 525V 8mfd Electrolytic condenser
49. 525V 8mfd electrolytic condenser
8. 50T ½W Res.

STROMBERG-CARLSON RADIO

Manufactured by Stromberg-Carlson (Aust.) Pty. Ltd., Sydney, N.S.W.

STROMBERG-CARLSON 59

A.C. Broadcast Receiver



C1. 2 Gang type H. C-C.
C2. Air Trimmer
C3. .05mf 200V
C4. .1mf 200V
C5. 2 gang type H. C-C
C6- Air Trimmer
C7. 440mmf
C8. 100mmf
C9. 100mmf
C10. .1mf 200V
C11. .1mf 400V
C12. 150mmf
C13. .01mf 400V
C14. 250mmf

C15. 10mf 25V
C16. 500mmf
C17. .01mf 400V
C18. .1mf 200V
C19. 8mf 500V
C20. 16mf 500V
C21. .003mf 600V
C22. .005mf 600V
C23. .02mf 400V
C24. .1mf 400V
C25. 5mmf
R1. 300w 1/3 W
R2 .05Mw 1/3 W
R3. 600 w 1/3 W
R4. .04 Mw 1/2W
R5. 1 Mw 1/3 W
R6. 1 Mw Vol.Cont.
R7. .25 Mw 1/3 W
R8. 4000 w 1/3 W
R9. .25 Mw 1/3 W
R10. .5 Mw 1/3 W
R11. 1 Mw 1/3 W
R12. .25 Mw 1/3 W
L5. 1000 w Field

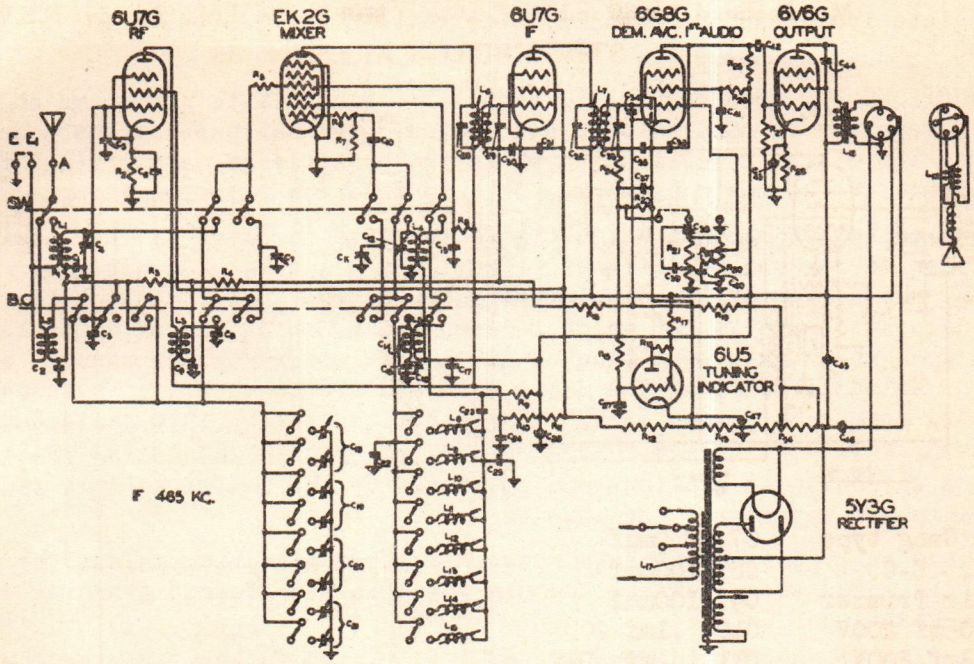
VOLTAGES. These were measured with a line voltage of 240, and a voltmeter having a resistance of 1000 ohms per volt. All readings were between the points indicated and chassis.

VALVE.		PLATE	SCREEN	CATHODE
6A8G	Mixer	210	70	2.5
	Oscillator Section	210	-	-
6U7G	I.F.	210	70	3
6B6G	Dem. AVC 1st audio	80	-	1
6F6G	Output	195	210	0 *

* The grid bias for the 6F6G cannot be directly measured on an ordinary voltmeter. It is derived from the voltage drop (55 volts) across the speaker field situated in the negative. HT leads. To reduce the 55 volts to a suitable value for bias two resistors of 1 megohm and 0.25 megohm are connected in series across the speaker field and their common point gives 11 volts bias for the 6F6G.

STROMBERG-CARLSON 781

A.C. Dual Wave Receiver



C1. .004mf
C2. .05mf 200V
C3. Air trim. 15P
C4. Air trim. 15P
C5. 3 gang type F
C6. .1mf 400V
C7. 3 gang type F
C8. Air trim. 15P
C9. .05mf 200V
C10. 100mmf
C11. 3 gang type F
C12. Air trim.15P
C13. .1mf 400V
C14. Air trim.15P
C15. 425mmf
C16. Air trim.18P
C17. .05mf 400V
C18. Twin Ceramic 2P (Red)
C19. Twin Ceramic 3P (Yellow)
C20. Twin Ceramic 4P (Green)
C21. Twin Ceramic 6P (Blue)
C22. 500mmf
C23. .001mf
C24. .5mf 400V
C25. 400mmf
C26. 8mf Wet 500V
C27. .05mf 200V
C28. 250mmf
C29. 150mmf
C30. .05mf 200V
C31. .1mf 400V
C32. 150mmf
C33. 250mmf
C34. 100mmf
C35. 250mmf
C36. 500mmf
C37. 100mmf
C38. .001mf
C39. .01mf 400V
C40. .01mf 400V
C41. .1mf 400V
C42. .01mf 400V
C43. 25mf elec. 25V
C44. .004mf 600V
C45. 16mf Wet elec. 500V
C46. 16mf wet elec. 500V
C47. 10mf dry elec. 25V
R1. .1 Mw
R2. 500 w
R3. .1 Mw
R4. .1 Mw
R5. 50 w
R6. 50 w
R7. .05 Mw
R8. .15 Mw
R9. .02 Mw
R10. 3,000 W
R11. 11,000 W
R12. 11,000 W
R13. 150 W
R14. 40 W
R15. 1 Mw
R16. 1 Mw
R17. .05 Mw
R18. 1 Mw
R19. 1 Mw
R20. 1 Mw (Vol.)
R21. 1 Mw(Tone)
R22. .1 Mw
R23. .25 Mw
R24. .05 Mw
R25. .2 Mw
R26. 1 Mw
R27. .5 Mw
R28. 250 w
L18. Speaker 1,000 w Field

VALVE	PLATE	SCREEN	CATHODE	BACK BIAS
6U7G RF	260	85	2.5	3
EK2G Mixer Oct.Section	260	75	0	3
Triode "	180	-	-	-
6U7G I.F.	260	85	0	3
6G8G Dem.AVC 1st Audio	50	*	1.5	0
6V6G Output	240	260	13	0

The foregoing voltages were measured with a 1000 ohm per volt meter between the points indicated and chassis. Line voltage was 240 volts AC.
* Fed through 1 megohm from B+180 volts.

INSTRUCTIONS FOR ADJUSTING MAGIC KEYBOARD. Since it is now known at the time a receiver is manufactured and tested, just what part of the country will be its ultimate destination, it is not possible to make a final factory adjustment of the Magic Keyboard. This is done "on location."

The horizontal escutcheon which frames the selector keys of the Magic Keyboard can be removed by extracting four fixing screws; (do not lose these, as they are a special size) this brings into view a cavity about three inches deep, at the bottom of which is seen the green lacquered, white-lettered plate upon which have been mounted all the selector key and manual adjustments. No adjustments of the Magic Keyboard are necessary, with respect to the keys marked "B/C" and "S/W." The other keys will, when depressed and adjusted, provide selective control of any group of broadcasting stations. Thus, a selection of stations can be preset by the Dealer to suit local frequency and wavelength assignments.

When once set, these adjustments need no further attention unless the receiver is moved to a district wherein there is a different grouping of favourite stations.

At the base of each Magic Key Plunger, are printed numbers showing the frequency range in kilocycles of that particular key, and radiating from these numbers, are dotted lines, printed in white upon the green surface of the mounting plate, and terminating at the screw adjusters which control the wave length and frequency adjustment of the key. The rear group of screws control the frequency of the oscillators, which work one in conjunction with each key. The frontal set of screws control, one in conjunction with each key, the Antenna Tuning Adjustment.

The operation of presetting a given station involves adjusting one "P.B. Oscillator" and one "Antenna Trimmer" (as paired by the dotted indicator lines leading to the controlling key) for each available Magic Key selector switch. The arrows printed on the green base, around the "P.B. Oscillator" adjustor screws indicate the direction in which to turn the adjusting screw in order to increase or decrease the frequency adjustment. Usually manipulation of the volume control is helpful.

To preset the Stromberg-Carlson Magic Keyboard, proceed as follows:-
1. Depress "B/C" Key and tune in the desired station on the manual dial in the regular way, using the "Magic Eye" to determine precise adjustment.
2. Select and depress the Magic Key, the stated frequency range of which includes the frequency indicated on the "B/C" dial for the desired station.
3. Adjust the "P.B. Oscillator," and then the "Antenna Trimmer" screws (indicated by the dotted lines connecting these screws to the base of the Magic Key Plunger that is in use) until the desired station has been tuned in clearly. Use the "Magic Eye" to assist in obtaining the best adjustment.

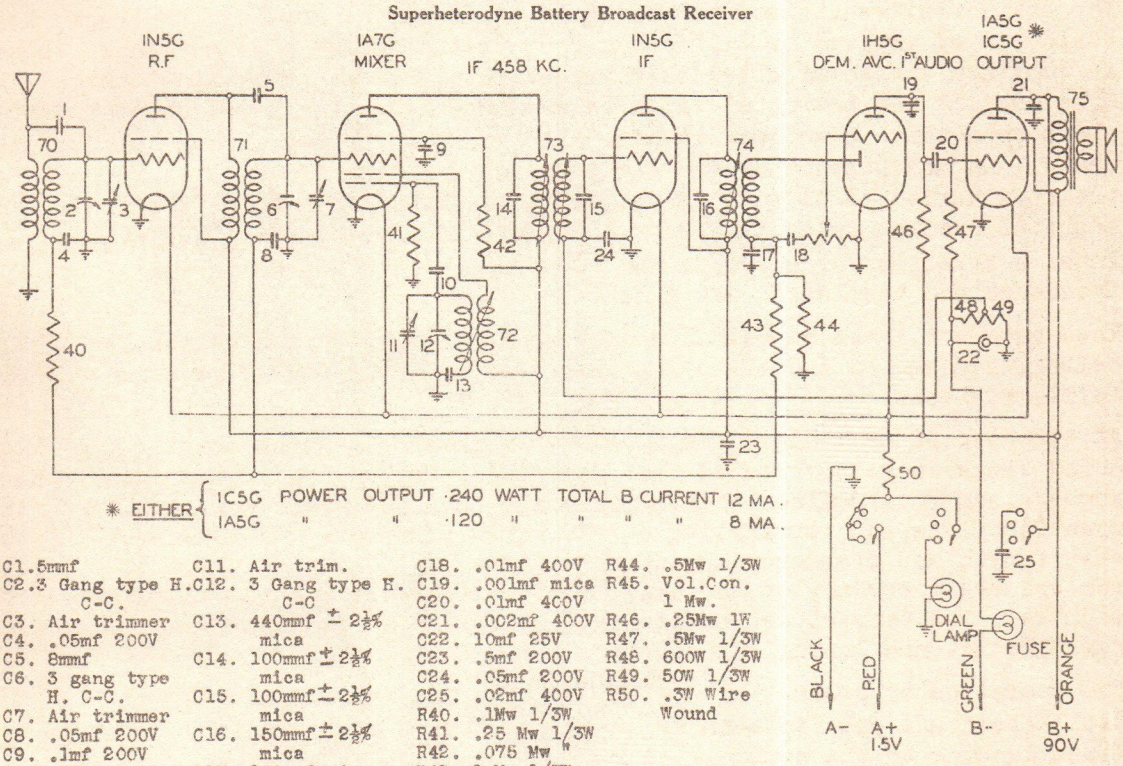
(It is important to carefully note at which end of the key's frequency range, the desired frequency is to be found; this will enable the operator to turn the frequency adjusting screws nearly all in (to the right) if the desired frequency is at the lower limit of the Magic Key's range, or nearly

all out (to the left) if the desired frequency is near the higher limit of the range. The "P.B. Oscillator" adjustment is the most important of the two that are made for each key setting. The full range of this adjustment from maximum to minimum will require approx. 15 complete turns of the screw.

4. Depress the "B/C" Magic Key and listen to the programme on "B/C," and then to the same programme as heard when the station Selector Key is depressed. Compare volume and quality. Use the Magic Eye for the "B/C" and station selector Magic Key settings to obtain perfect adjustment of both. When both systems have been correctly adjusted they will sound the same,but the Magic Eye may not close as much on the station selector key as it does on the "B/C" key.

STROMBERG-CARLSON D50-PD50

Superheterodyne Battery Broadcast Receiver



C1. .5mmf
C2. 3 Gang type H. C-C.
C3. Air trimmer
C4. .05mf 200V
C5. 8mmf
C6. 3 gang type H. C-C.
C7. Air trimmer
C8. .05mf 200V
C9. .1mf 200V
C10. 100mmf Mica
C11. Air trim.
C12. 3 Gang type H. C-C
C13. 440mmf ± 2½% mica
C14. 100mmf ± 2½% mica
C15. 100mmf ± 2½% mica
C16. 150mmf ± 2½% mica
C17. 250mmf mica
C18. .01mf 400V
C19. .001mf mica
C20. .01mf 400V
C21. .002mf 400V
C22. 10mf 25V
C23. .5mf 200V
C24. .05mf 200V
C25. .02mf 400V
R40. .1Mw 1/3W
R41. .25 Mw 1/3W
R42. .075 Mw "
R43. 1 Mw 1/3W
R44. .5Mw 1/3W
R45. Vol.Con. 1 Mw.
R46. .25Mw 1W
R47. .5Mw 1/3W
R48. 600W 1/3W
R49. 50W 1/3W
R50. .3W Wire Wound

VALVES & VOLTAGES: The valves 1A5G and 1C5G are interchangeable without circuit alterations. 1C5G = Power output .24 watt, total B current 12 MA. 1A5G = Power output .12 watt, total B current 8 MA.

VALVE.		PLATE	SCREEN	BACK BIAS
1N5G	R.F.	83	83	-
1A7G	Mixer	83	35	-
	Triode Section	83	-	-
1N5G	I.F.	83	83	0.5
1H5G	Dem. AVC. Audio	30	-	-
1C5G	Output	80	83	7
or 1A5G	Output	83	85	4.5

All voltages were measured with a voltmeter having a resistance of 1000 ohms per volt between the points indicated and chassis.

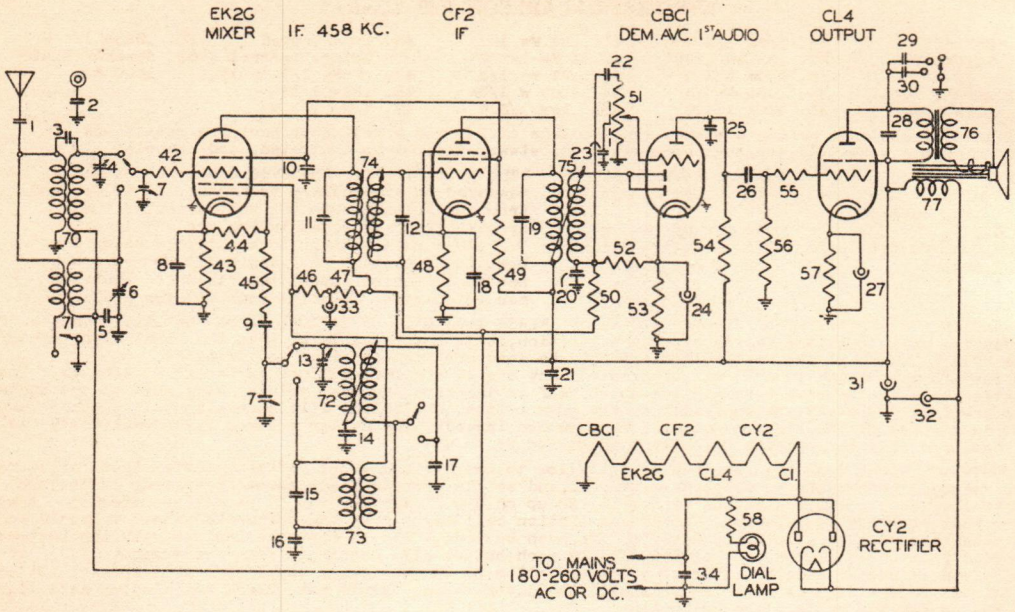
STROMBERG-CARLSON D70

Superheterodyne A.C./D.C. Dual Wave Receiver

CAPACITORS.
1. .003mf 600V
2. .02mf 600V
3. 5mmf
4. Air trimmer
5. .05mf 200V
6. Air trimmer
7. 2 Gang type H. C-C.
8. .1mf 200V
9. 100mmf
10. .05mf 400V
11. 100mmf ± 2½%
12. 100mmf ± 2½%
13. Air trimmer
14. 440mmf ± 2½%
15. 5mmf
16. .004mf
17. .01mf 400V
18. .1mf 200V
19. 150mmf ± 2½%
20. 250mmf
21. .1mf 400V
22. .01mf 400V
23. .003mf 600V
24. 10mf 25V
25. 500mmf
26. .01mf 400V
27. 10mf 25V
28. .004mf 600V
29. .02mf 400V
30. .05mf 400V
31. 24mf 350V -
32. 16mf 350V
33. 4mf 350V
34. .02mf 600V

RESISTORS.
42. 50w 1/3W
43. 600w 1/3W
44. 50,000 w 1/3W
45. 100w 1/3W
46. 10,000 w ½W
47. 10,000w ½W
48. 600 w 1/3W
49. 70,000w ½W
50. 1 meg. w 1/3W
51. 1 meg.w. Vol.Con.
52. .25meg. w 1/3W
53. 2000 w 1/3W
54. .2meg. w 1W
55. .1meg. w 1/3W
56. .5meg. w 1/3W
57. 200w 1W
58. 750 w 3W
77. Speaker Field 1000w.

STROMBERG-CARLSON D70 (Contd.)



VOLTAGES: This receiver will operate on alternating or direct current power supplies between 180 and 260 volts. No adjustment to the chassis is necessary. When used on D.C. the plug must be connected in the correct polarity. If reversed, the receiver will not operate.

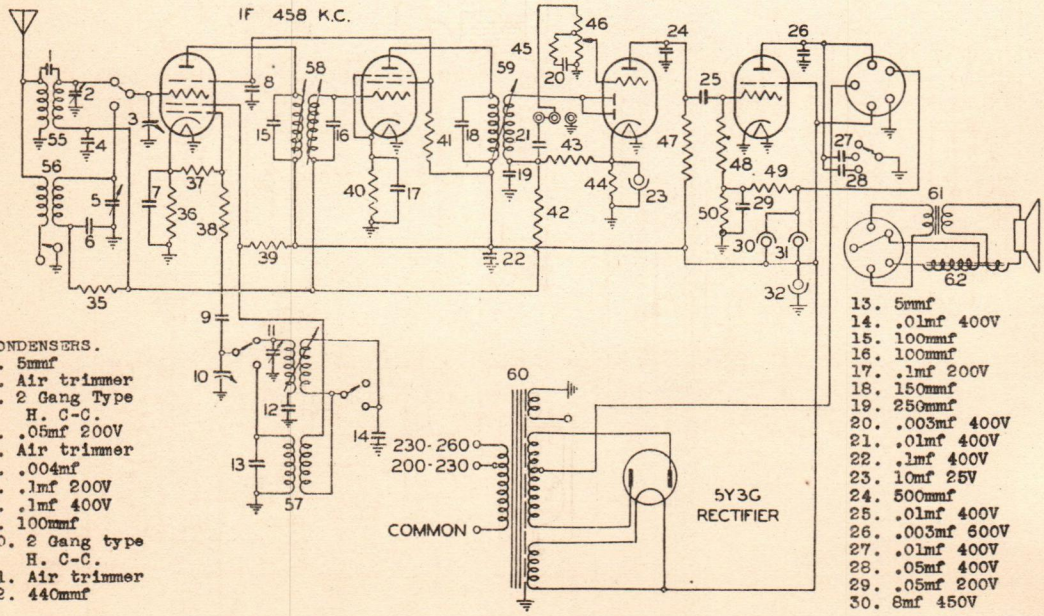
The following voltages were measured with a line voltage of 240 A.C. and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated, and chassis.

VALVE.		PLATE	SCREEN	CATHODE
EK2G	Mixer	230	75	3.5
	Oscillator Section	180	-	-
CF2	I.F.	230	75	2.5
CBC1	Dem. A.V.C. 1st Audio	50	-	1.5
CL4	Output	215	230	8

STROMBERG-CARLSON F69

Superheterodyne A.C. Broadcast Receiver

6J8G MIXER — 6U7G IF — 6B6G DEM. AVC. 1ST AUDIO — 6V6G OUTPUT



CONDENSERS.
1. 5mmf
2. Air trimmer
3. 2 Gang Type H. C-C.
4. .05mf 200V
5. Air trimmer
6. .004mf
7. .1mf 200V
8. .1mf 400V
9. 100mmf
10. 2 Gang type H. C-C.
11. Air trimmer
12. 440mmf
13. 5mmf
14. .01mf 400V
15. 100mmf
16. 100mmf
17. .1mf 200V
18. 150mmf
19. 250mmf
20. .003mf 400V
21. .01mf 400V
22. .1mf 400V
23. 10mf 25V
24. 500mmf
25. .01mf 400V
26. .003mf 600V
27. .01mf 400V
28. .05mf 400V
29. .05mf 200V
30. 8mf 450V

STROMBERG-CARLSON F69 (Contd.)

31. 8mf 450V
32. 8mf 450V

RESISTORS.
35. .1Mw 1/3W
36. 300w 1/3 W
37. .05 Mw 1/3W
38. 100w 1/3 W
39. .025 Mw 1W
40. 400w 1/3 W
41. .04 Mw ½W
42. 1 Mw 1/3 W
43. .25 Mw 1/3 W
44. 4000 w 1/3W
45. .1Mw 1/3 W
46. 1 Mw Tapped Volume Control
47. .25Mw 1/3 or 1W
48. .5Mw 1/3W
49. 1 Mw 1/3 W
50. .25Mw 1/3 W
62. Speaker Field 1000 w.

VOLTAGES: These were measured with a line voltage of 240 and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated, and chassis.

VALVE	PLATE	SCREEN	CATHODE
6J8G Mixer	240	90	3.5
Osc. Section	170	-	-
6U7G I.F.	240	90	3
6B6G Dem.AVC 1st Audio	100	-	1.25
6V6G Output	225	240	0*

*The grid bias for the 6V6G cannot be directly measured on an ordinary voltmeter. It is derived from the voltage drop (60 volts) across the speaker field situated in the neg. HT lead. To reduce this voltage to a suitable value for bias two resistors of 1 meg.and 0.25 meg.are connected in series across the field and their common point gives 12 volts bias for the 6V6G.

OPERATION AND ADJUSTMENT OF STROMBERG-CARLSON "FLASH TUNING". OPERATION: Since the likely choice of favourite radio stations varies with each location,it is not possible to make the final adjustmentof the "Flash Tuner" at the Factory. This should be done when the receiver is installed.
To operate the "Flash Tuner", simply press in any one of the push buttons as far as it will go. The station selector knob will spring out about half an inch,and the dial pointer will move to the station previously pre-set and indicated on the push button. The button will remain in till another button is pressed or the station selector knob pushed inwards. The latter control is automatically disengaged and will not operate when any push button is in use.

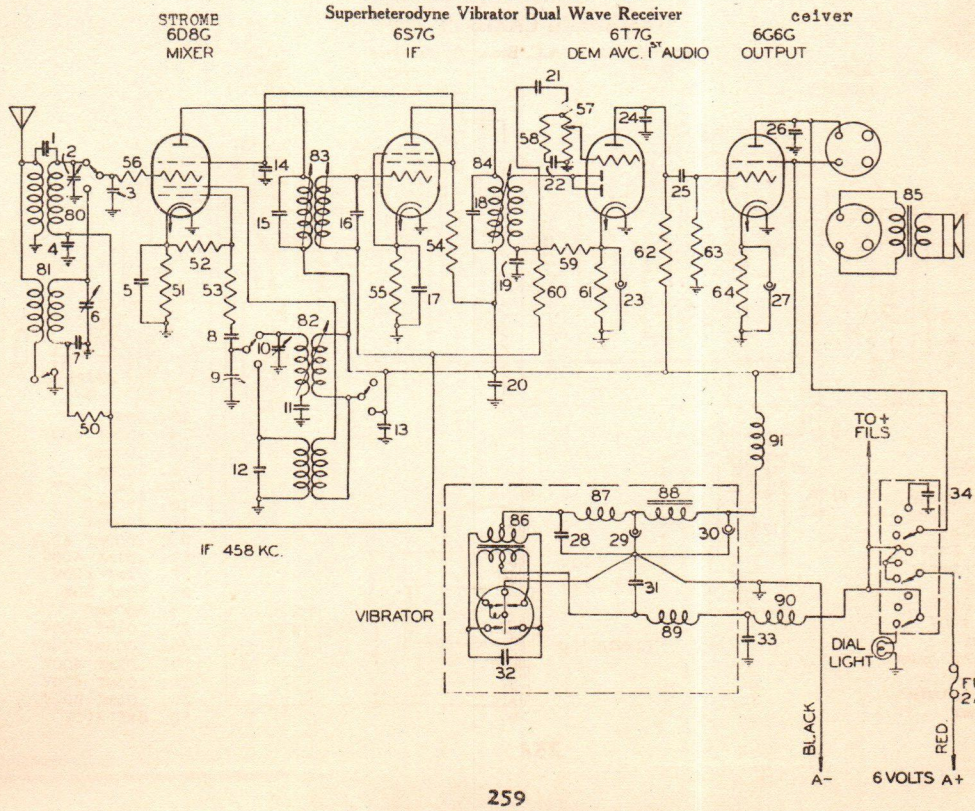
ADJUSTMENT: First turn the receiver on and allow to operate for about fifteen minutes,thus allowing the receiver components to thoroughly warm up and settle down to their normal operating conditions. Meanwhile, decide which stations are to be set up on the "Flash Tuner". It is not recommended that very weak stations be selected. Detach the station call signs from the perforated sheet provided and put them behind the celluloid windows on the push buttons. This is best carried out with the buttons removed from the receiver. An outward pull on each button will detach it from its support. If the celluloid is pushed towards either the top or bottom of the button, a small slot will appear. Stick a pointed object such as a pin in this slot and lever the celluloid out. Place the station call sign in the recess and replace the celluloid.

Directly behind each button in the receiver is a slotted steel screw. Place the tip of a long screwdriver in the slot and push inwards till the mechanism catches Then rotate the screw either clockwise or counter-clockwise till the desired station is tuned in. Watching the dial pointer will indicate the direction of rotation. For best results it is desirable to approach the station with a clockwise movement of the screw. If,in tuning,the station is approached in a counter-clockwise movement of the screw,it is better to overrun the station and come back in a clockwise direction.

Carefully check the adjustment by alternately pushing in the button just set up and any other buttons. If the station is not then correctly tuned,the operation will have to be repeated. Then replace the button with the call sign corresponding to the station just set up. In like manner adjust all the remaining push buttons. As a final check compare the tone of the station as tuned in with the manual station selector knob and with the push button mechanism. The two should give identical results.

STROMBERG-CARLSON F20

Superheterodyne Vibrator Dual Wave Receiver



STROMBERG-CARLSON F20 (Contd.)

CAPACITORS.
1. 5mmf
2. Air trimmer
3. 2 Gang type H. C-C.
4. .05mf 200V
5. .1mf 200V
6. Air trimmer
7. .004mf
8. 100mmf
9. 2 Gang type H. C-C.
10. Air trimmer
11. 440mmf ± 2½%
12. 5mmf
13. .01mf 400V
14. .05mf 400V
15. 70mmf +0, −5%
16. 70mmf +0. −5%
17. .1mf 200V
18. 150mmf ± 2½%
19. 250mmf
20. .1mf 400V
21. .01mf 400V
22. .003mf 400V
23. 10mf 25V
24. 500mmf
25. .01mf 400V
26. .003mf 600V
27. 10mf 25V
28. .01mf
29. 16mf 300V
30. 16mf 300V
31. .5mf 200V
32. .005mf 2000V
33. 006mf
34. .01mf 400V

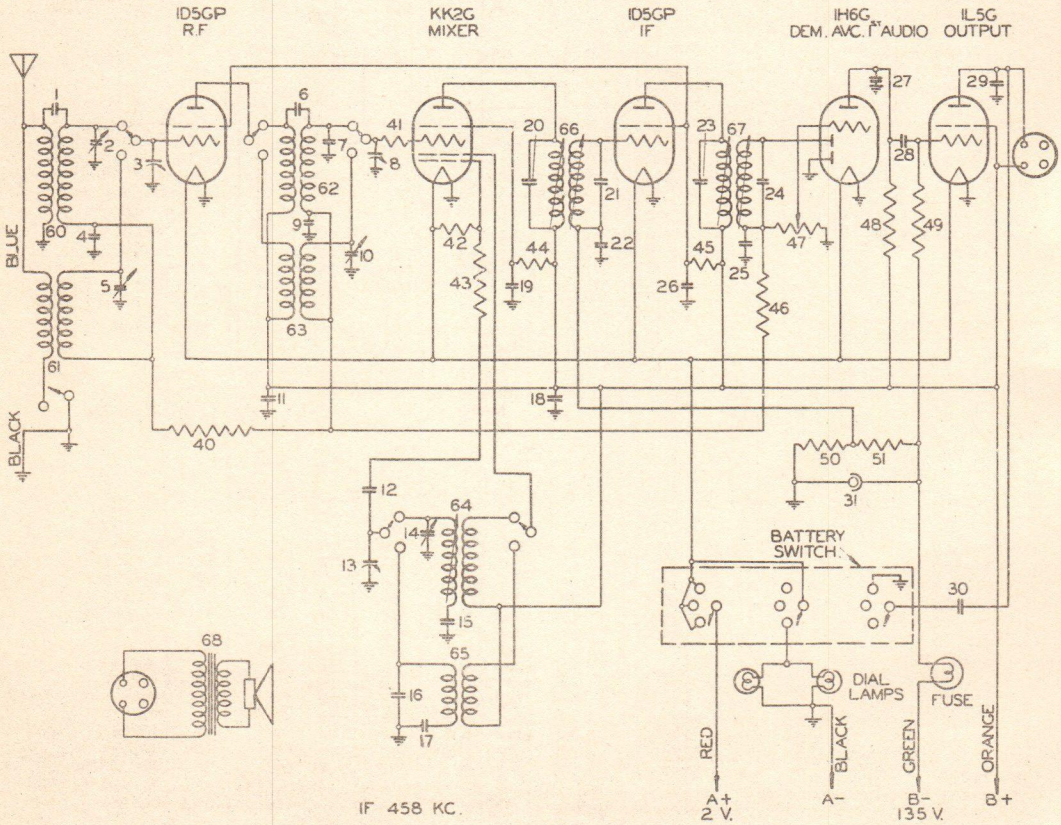
RESISTORS.
50. 100,000W 1/3W
51. 600W 1/3W
52. 50,000W 1/3W
53. 50W 1/3W
54. 40,000w 1W
55. 600w 1/3W
56. 50w 1/3W
57. Vol.Cont.1meg.
58. 100,000w 1/3W
59. 500,000w 1/3W
60. 1meg.w. 1/3W
61. 4,000w 1/3W
62. 250,000w 1W
63. 500,000w 1/3W
64. 500w 1/3W

VOLTAGES: These were measured with a battery voltage of 6 and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated,and chassis.

VALVE.		PLATE	SCREEN	CATHODE
6D8G	Mixer	135	70	4.5
	Oscillator	135	-	-
6S7G	I.F.	135	70	3
6T7G	Dem. AVC. 1st Audio	60	-	1
6G6G	Output	130	135	6

STROMBERG-CARLSON 620

Superheterodyne Battery Dual Wave Receiver



CAPACITORS.
1. 5mmf
2. Air trimmer 15P
3. 3 Gang type "H" C.
4. .05mf 200V
5. Air trimmer 15P
6. 5mmf
7. Air trimmer 15P
8. 3 Gang type "H" C.
9. .05mf 200V
10. Air trimmer 15P
11. .01mf 400V
12. 100mmf
13. 3 Gang type "H" C.
14. Air trimmer 15P
15. 440mmf ± 2½%
16. 5mmf
17. .004mf
18. .5mf 200V
19. .05mf 200V
20. 70mmf ± 2½%
21. 70mmf ± 2½%
22. .05mf 200V
23. 100mmf ± 2½%
24. 100mmf ± 2½%
25. 250mmf
26. .05mf 200V
27. 500mmf
28. .01mf 400v
29. .002mf 400V
30. .01mf 400V
31. 10mf 25V

RESISTORS.
40. 100,000w 1/3W
41. 50w 1/3W
42. 50,000w 1/3W
43. 50w 1/3W
44. 50,000w 1/3W
45. 50,000w 1/3W
46. 1meg. 1/3W
47. .25meg.Vol. Control
48. 250,000w 1/3W
49. 500,000w 1/3W
50. 50w 1/3W
51. 300w 1/3W

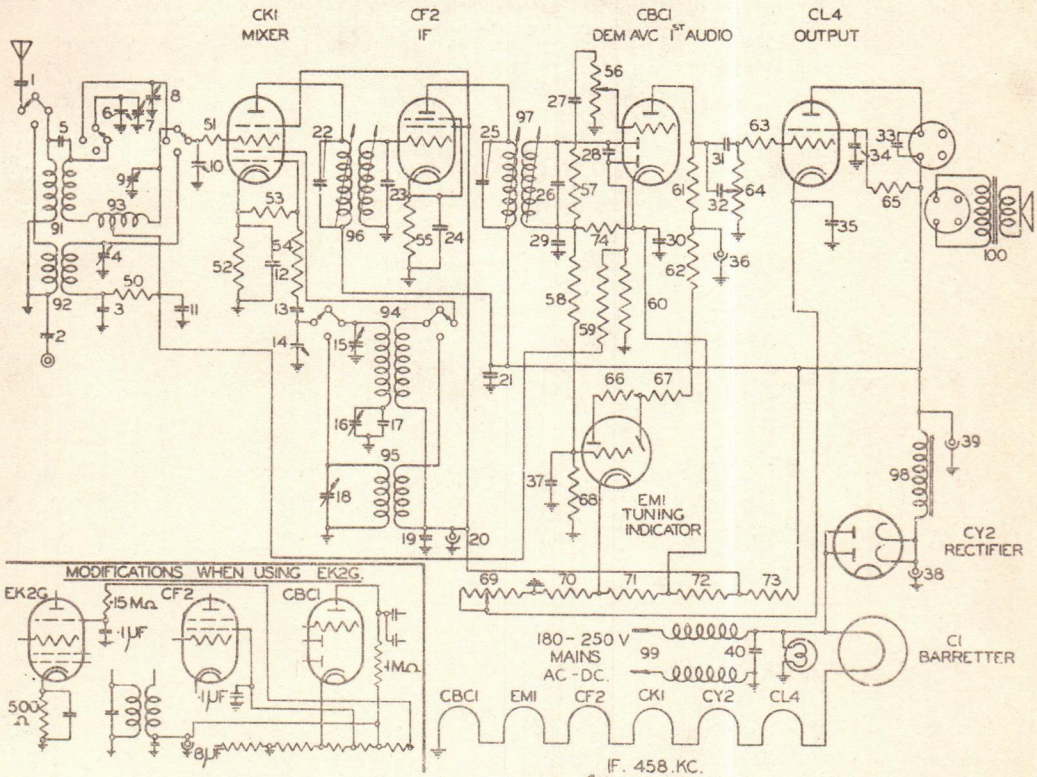
STROMBERG-CARLSON 620 (Contd.)

VALVES AND VOLTAGES: All voltages were measured with a voltmeter having a resistance of 1000 ohms per volt between the points indicated and chassis.

VALVE		PLATE	SCREEN	BACK BIAS
1D5GP	R.F.	130	55	-
KK2G	Mixer	130	55	-
	Triode Section	130	-	-
1D5GP	I.F.	130	55	1.5
1H6G	Dem. A.V.C. Audio	50	-	-
1L5G	Output	127	130	5

STROMBERG-CARLSON 688

Superheterodyne A.C./D.C. Dual Wave Receiver



CAPACITORS.
1. .01mf 2000V
2. .01mf 2000V
3. .004mf
4. Air trimm. 15P
5. 5mmf
6. 3 Gang type F.C-C
7. Air trimm. 15P
8. Air trimm. 15P
9. Air trimm. 15P
10. 3 Gang type F.C-C
11. .1mf 400V
12. .1mf 400V
13. 100mmf
14. 3 Gang type F.C-C
15. Air trimmer 15P
16. Air trimmer 15P
17. 425mmf ± 2½%
18. Air trimmer 15P
19. .1mf 400V
20. 4mf 350V
21. .1mf 400V
22. 250mmf ± 2½%
23. 250mmf ± 2½%
24. .1mf 400V
25. 250mmf ± 2½%
26. 250mmf ± 2½%
27. .02mf 400V
28. 100mmf
29. 100mmf
30. 10mf 25V
31. .001mf
32. .01mf 400V
33. .005mf 600V
34. .1mf 400V
35. 10mf 25V
36. 4mf 350V
37. .1mf 400V
38. 16mf 500V
39. 16mf 500V
40. .02mf 400V

RESISTORS.
50. .5Mw 1/3W
51. 50w 1/3W
52. 300w 1/3W
53. .05Mw 1/3W
54. 50w 1/3W
55. 1000w 1/3W
56. 1 Mw Vol. Control
57. .1Mw 1/3W
58. 1 Mw 1/3W
59. 1 Mw 1/3W
60. 1 Mw 1/3W
61. .1 Mw 1W.
62. .01 Mw 1W
63. .1 Mw 1/3W
64. .5Mw Tone Control
65. .01 Mw 1W
66. 1 Mw 1/3W
67. .05 Mw 1/3W
68. 1 Mw 1/3W
69. 150w
70. 150w
71. 150w
72. 15000w
73. 10000w
74. .5Mw 1/3W

VOLTAGES: These were measured with a line voltage of 240 A.C. and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated, and chassis. On D.C. they will be lower.

	VALVE	PLATE	SCREEN	CATHODE
*CK1	Mixer	230	75	3
	Oscillator Section	75	-	-
CF2	I.F.	230	75	2.5
CBC1	Dem. A.V.C. 1st Audio	80	-	2.5
CL4	Output	200	180	8

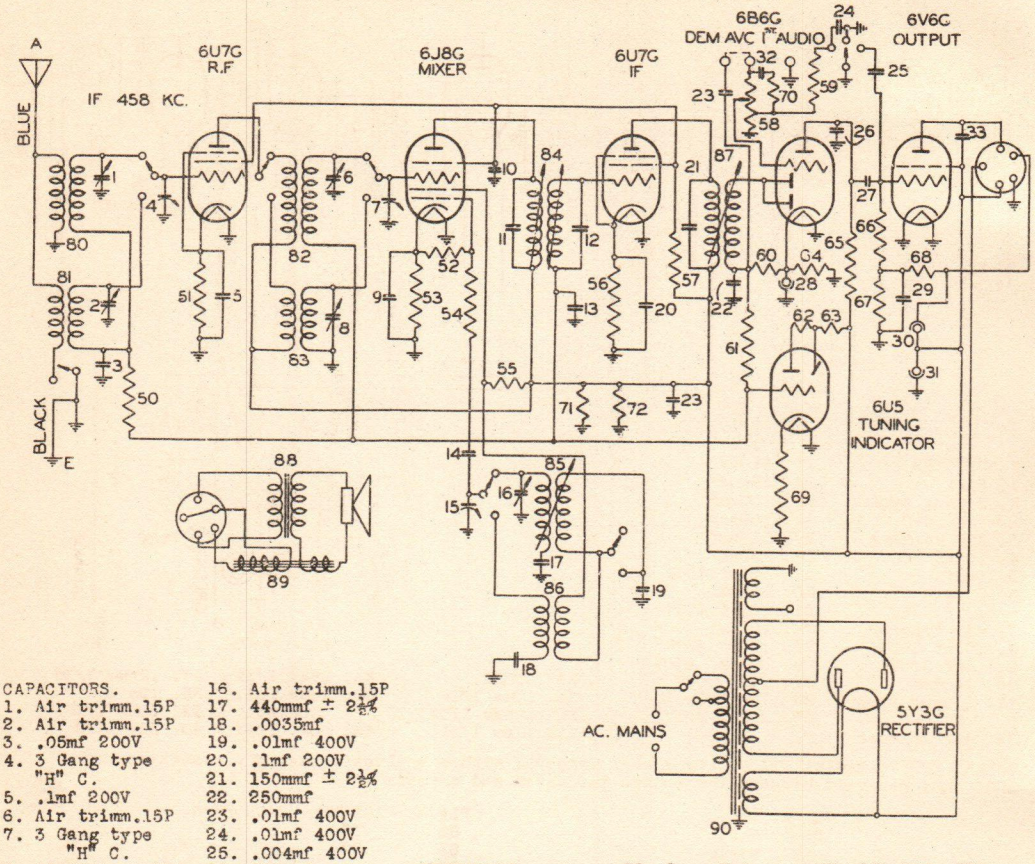
*Some receivers use an EK2G in place of the CK1, in which case the following changes are made.

EK2G	Mixer	230	50	3
	Oscillator Section	200	-	-
CF2	I.F.	230	90	2.5

This receiver will operate on alternating or direct current power supplies between 180 and 250 volts. No adjustment to the chassis is necessary. When used on D.C. the plug must be connected in the correct polarity. If reversed the receiver will not operate.

STROMBERG-CARLSON 640

Superheterodyne A.C. Dual Wave Receiver



CAPACITORS.

1. Air trimm.15P
2. Air trimm.15P
3. .05mf 200V
4. 3 Gang type "H" C.
5. .1mf 200V
6. Air trimm.15P
7. 3 Gang type "H" C.
8. Air trimm. 15P
9. .1mf 200V
10. .05mf 400V
11. 100mmf ± 2½%
12. 100mmf ± 2½%
13. .05mf 200V
14. 100mmf
15. 3 Gang type "H" C.
16. Air trimm.15P
17. 440mmf ± 2½%
18. .0035mf
19. .01mf 400V
20. .1mf 200V
21. 150mmf ± 2½%
22. 250mmf
23. .01mf 400V
24. .01mf 400V
25. .004mf 400V
26. 500mmf
27. .01mf 400V
28. 10mf 25V
29. 15mf 200V
30. 16mf 525PV
31. 8mf 525PV
32. 100mmf
33. .003mf 600V

RESISTORS.

50. 100,000w 1/3W
51. 600w 1/3W
52. 50,000w 1/3W
53. 300w 1/3W
54. 50w 1/3W
55. 25,000w 1W
56. 400w 1/3W
57. 50,000w 1W
58. 1meg.Vol. Control + Tap at .5meg.
59. 50,000w 1/3W
60. 250,000w " "
61. 1 meg. 1/3W
62. 1 meg.1/3W
63. 50,000w 1/3W
64. 4,000w 1/3W
65. 25 ,000w 1W
66. 500,000w 1/3W
67. 150,000w 1/3W
68. 1 meg. 1/3W
69. 2,000w 1/3W
70. 100,000w 1/3W
71. 150,000w 1W
72. 150,000w 1W

* In some Receivers Item 58 was 1 meg. tapped at .25 meg., 59 was 2500 w. 1/3W., 24 was .025 mf. 400V.

VOLTAGES: These were measured with a line voltage of 240 and a voltmeter having a resistance of 1000 ohms per volt. All readings were measured between the points indicated,and chassis.

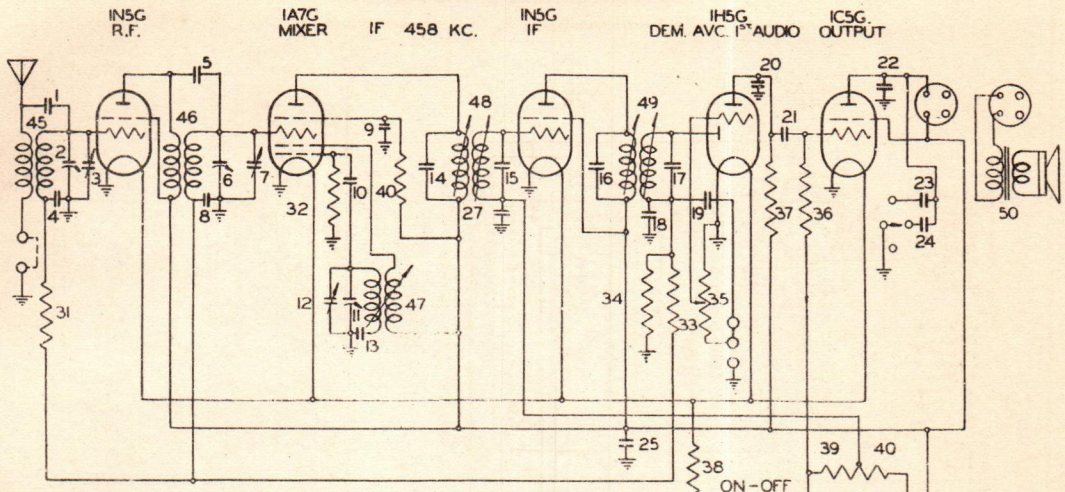
VALVE		PLATE	SCREEN	CATHODE
6J8G	Mixer	250	70	3
	Oscillator Section	170	-	-
6U7G	I.F.	250	70	3
6B6G	Dem. A.V.C. 1st Audio	120	-	1.25
6V6G	Output	235	250	0 *

* The grid bias for the 6V6G cannot be directly measured on an ordinary voltmeter. It is derived from the voltage drop (95 volts) across the speaker field situated in the negative HT lead.

To reduce this voltage to a suitable value for bias two resistors of 1 megohm and 0.15 megohm are connected in series across the field and their common point gives 13 volts bias for the 6V6G.

STROMBERG-CARLSON 690

Superheterodyne Battery Broadcast Receiver



CONDENSERS.

1. 5mmf
2. 3 Gang type F. C-C
3. Air trimmer
4. .05mf 200V
5. 5mmf
6. 3 Gang type F. C-C
7. Air trimmer
8. .05mf 200V
9. .1mf 200V
10. 100mmf
11. 3 Gang type F. C-C
12. Air trimmer
13. 440mmf
14. 100mmf
15. 100mmf
16. 150mmf
17. 250mmf
18. 250mmf
19. .01mf 400V
20. 500mmf
21. .01mf 400V
22. .002mf 400V
23. .03mf 400V
24. .006mf 400V
25. .5mf 200V
26. 10mf elect.
27. .05mf 200V

RESISTORS.

31. .1Mw 1/3W
32. .25Mw 1/3W
33. 1 Mw 1/3W
34. .5Mw 1/3W
35. .5Mw Vol. Control
36. .5Mw 1/3W
37. .25Mw 1/3W
38. .5w W.W
39. 500w 1/3W
40. 50w 1/3W

VALVES AND VOLTAGES: All voltages were measured with a voltmeter having a resistance of 1000 ohms per volt between the points indicated and chassis.

VALVE		PLATE	SCREEN	BACK BIAS
1N5G	R.F.	83	83	-
1A7G	Mixer	83	35	-
	Triode Section	83	-	-
1N5G	I.F.	83	83	0.5
1H5G	Dem. AVC Audio	30	-	-
1C5G	Output	80	83	7

MEMORANDA

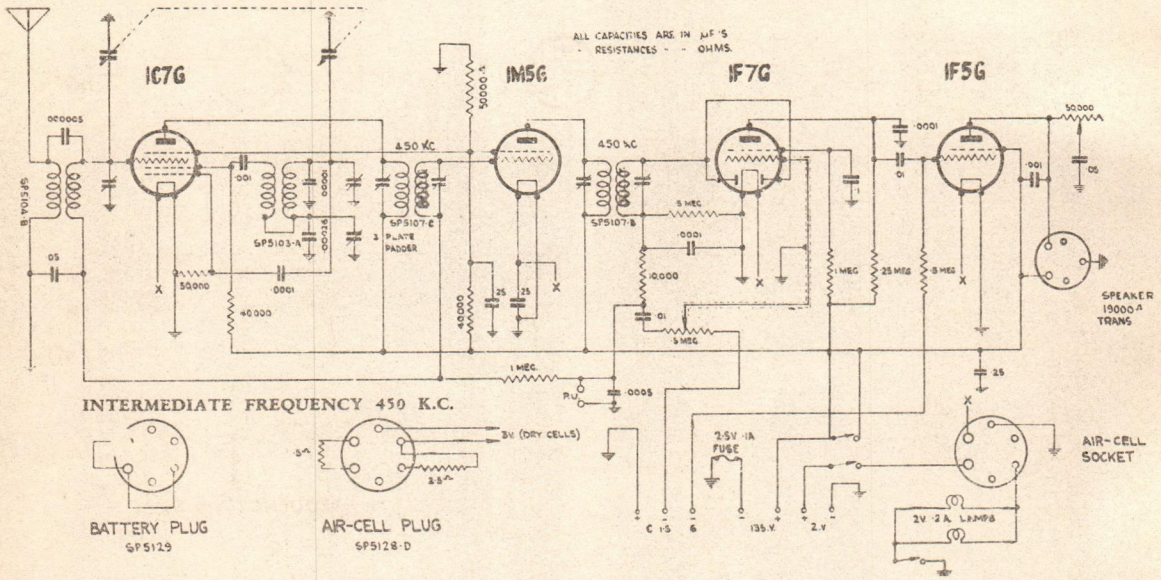
All production after September 1938 changed to Standard I.F. 465 K. C.

S.T.C. RADIO

Manufactured by Standard Telephones & Cables, Sydney, N.S.W.

S.T.C. 406-7

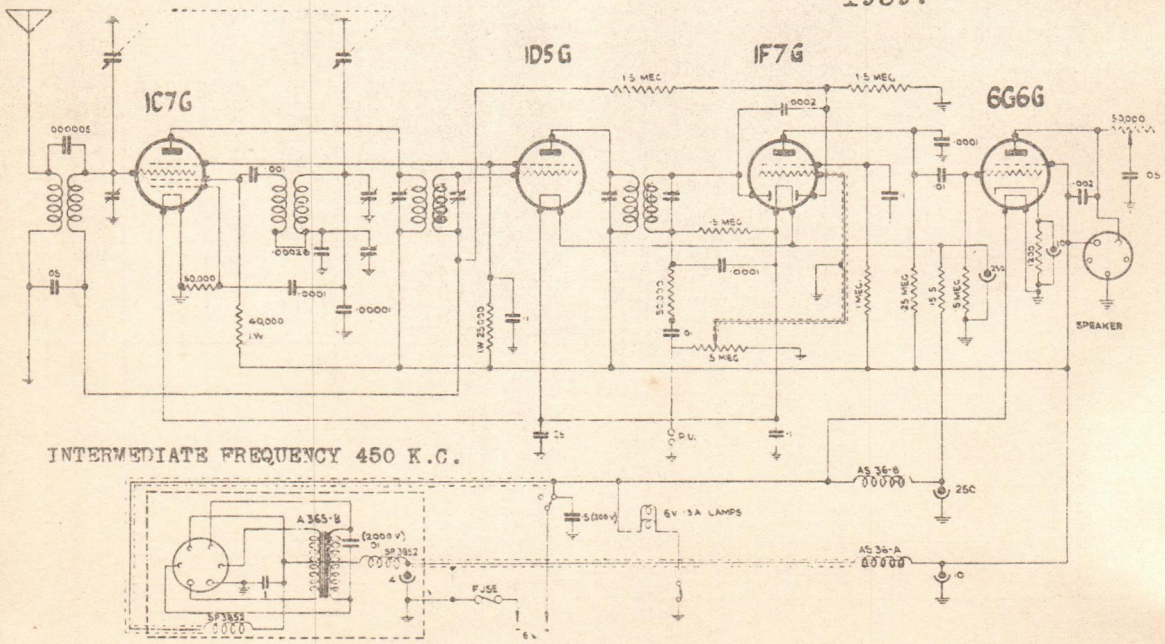
4-Valve B/C Battery



S.T.C. 408

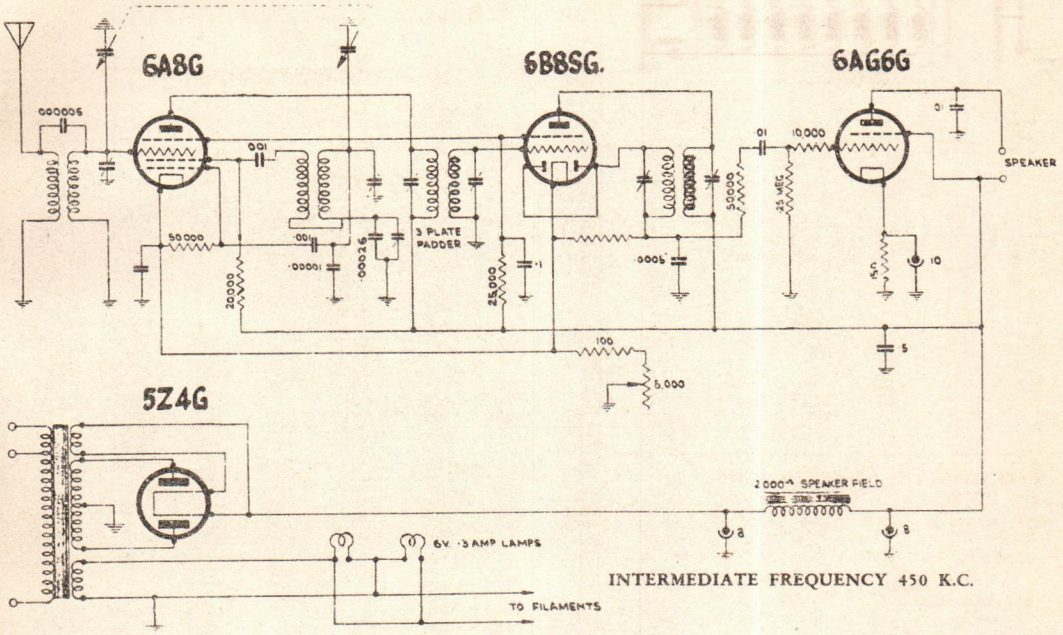
4-Valve B/C Vibrator

NOTE: Standard I.F changed from 450 K. C. to 455 K. C. during 1939.



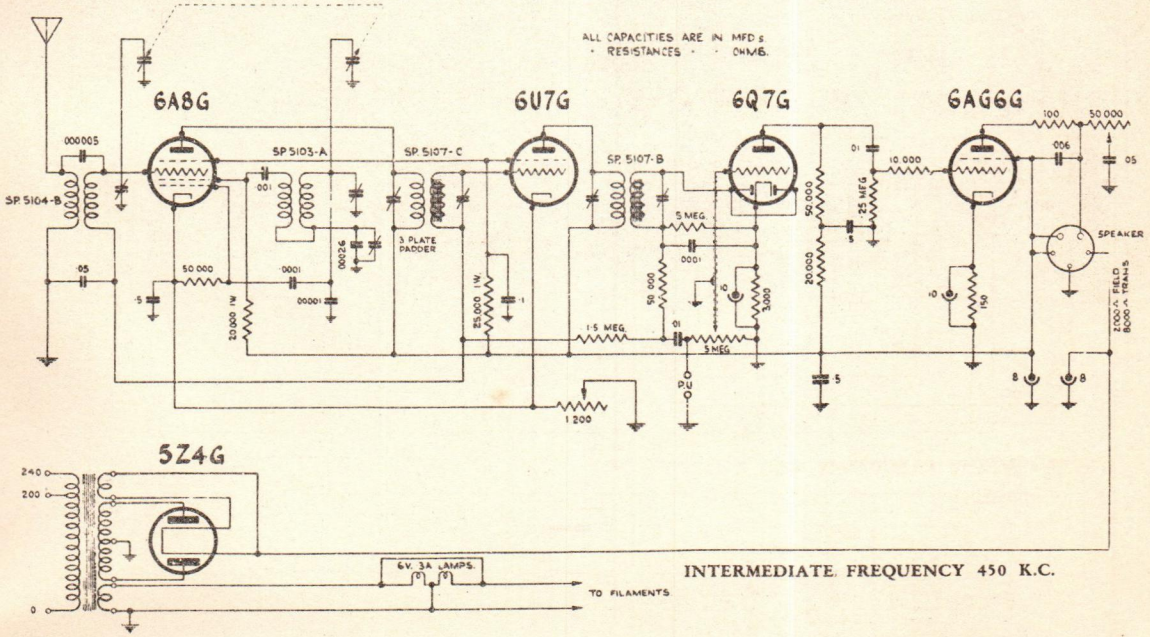
S.T.C. 410

4-Valve B/C A.C.



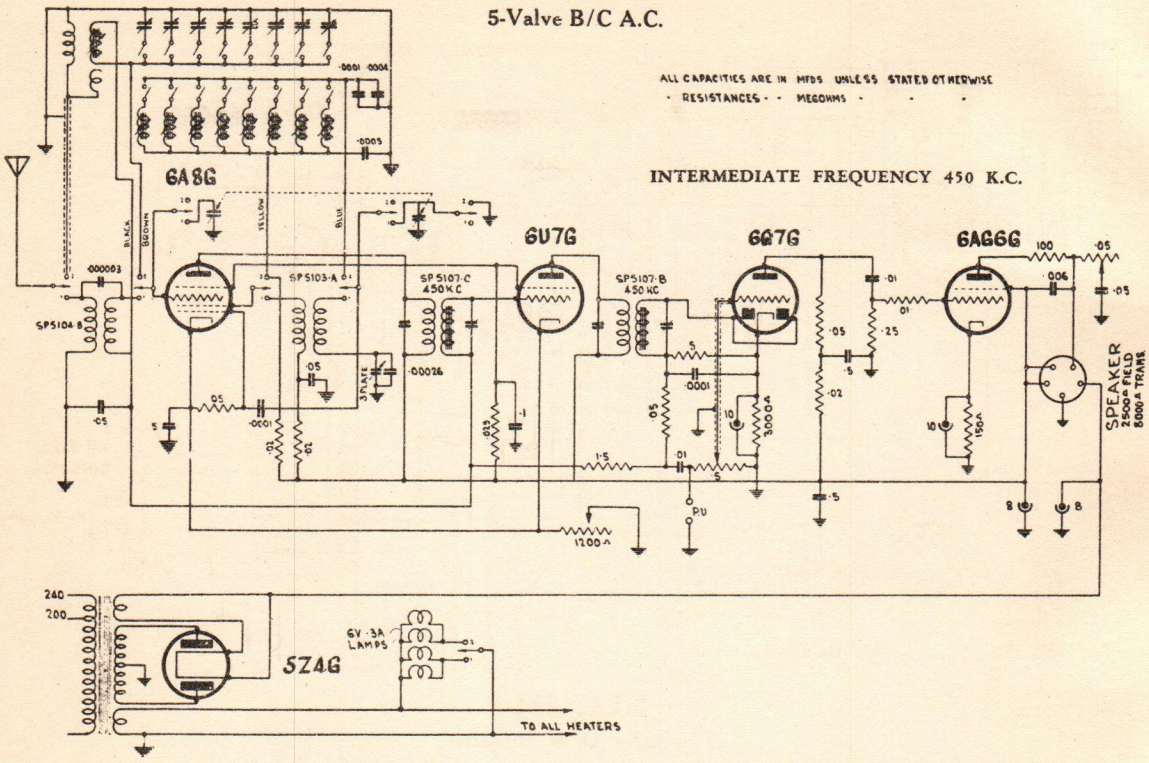
S.T.C. 504

5-Valve B/C A.C.



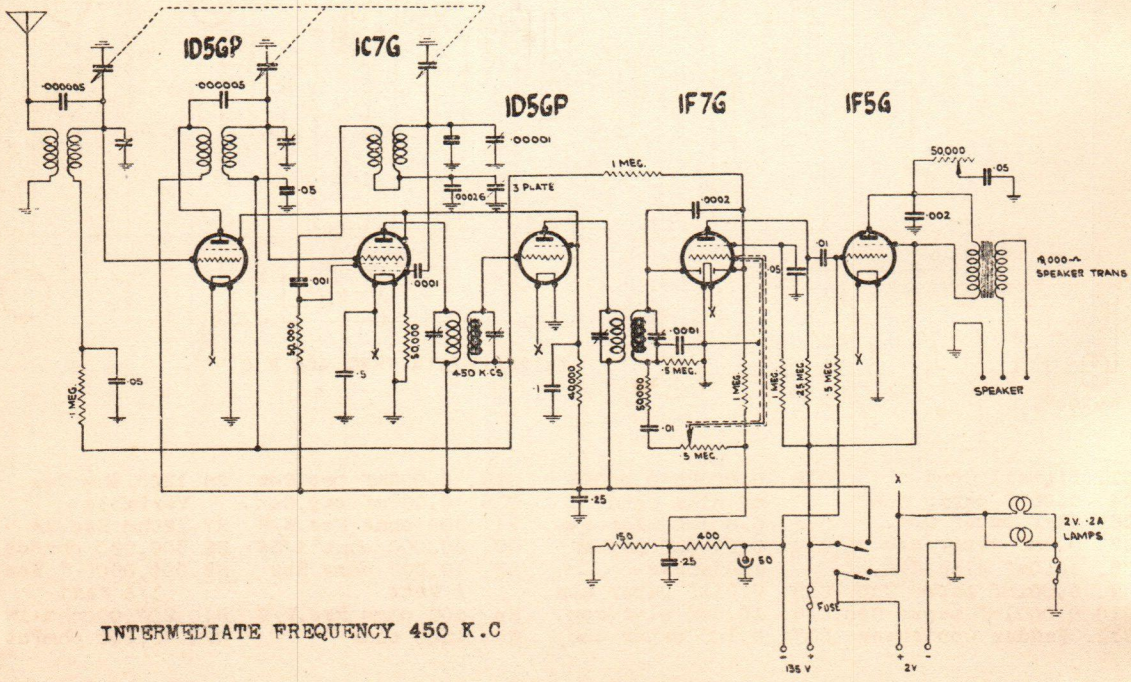
S.T.C. A.T. 505

5-Valve B/C A.C.



S.T.C. 506

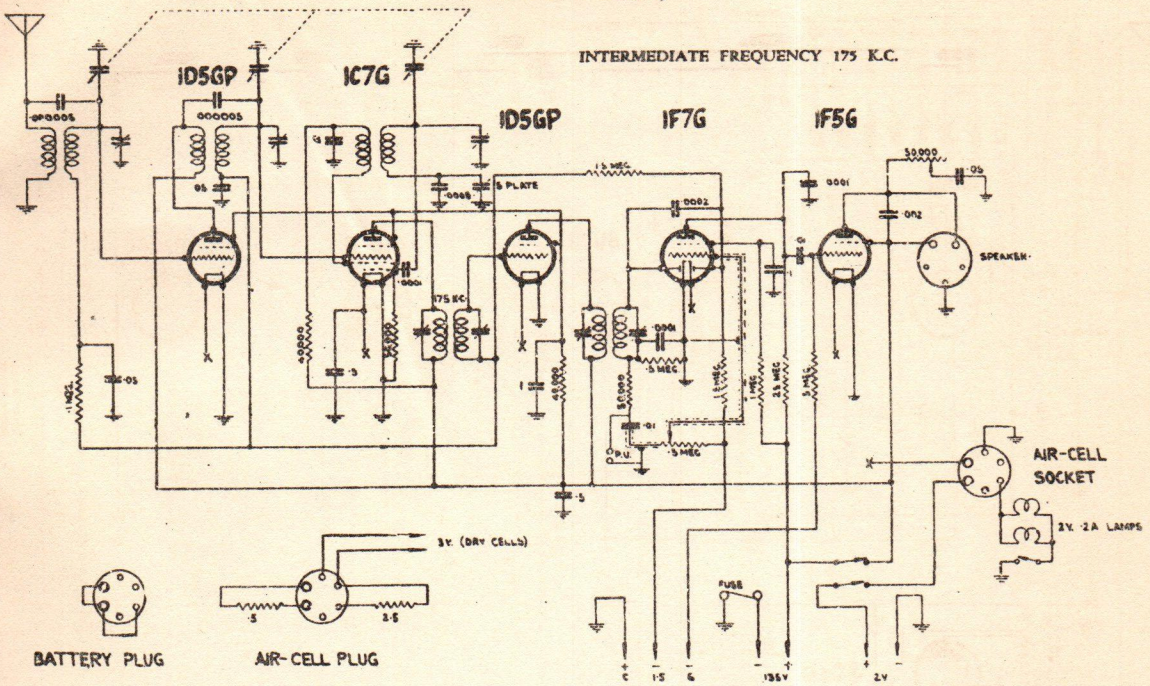
5-Valve B/C Battery



INTERMEDIATE FREQUENCY 450 K.C

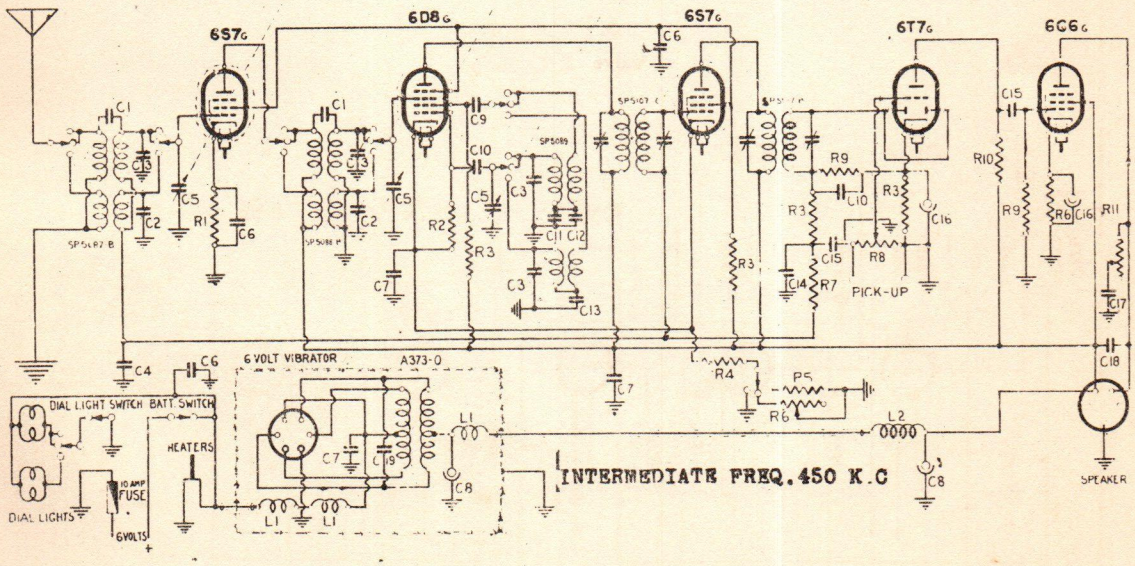
S.T.C. 507

5-Valve B/C Battery



S.T.C. 524-5

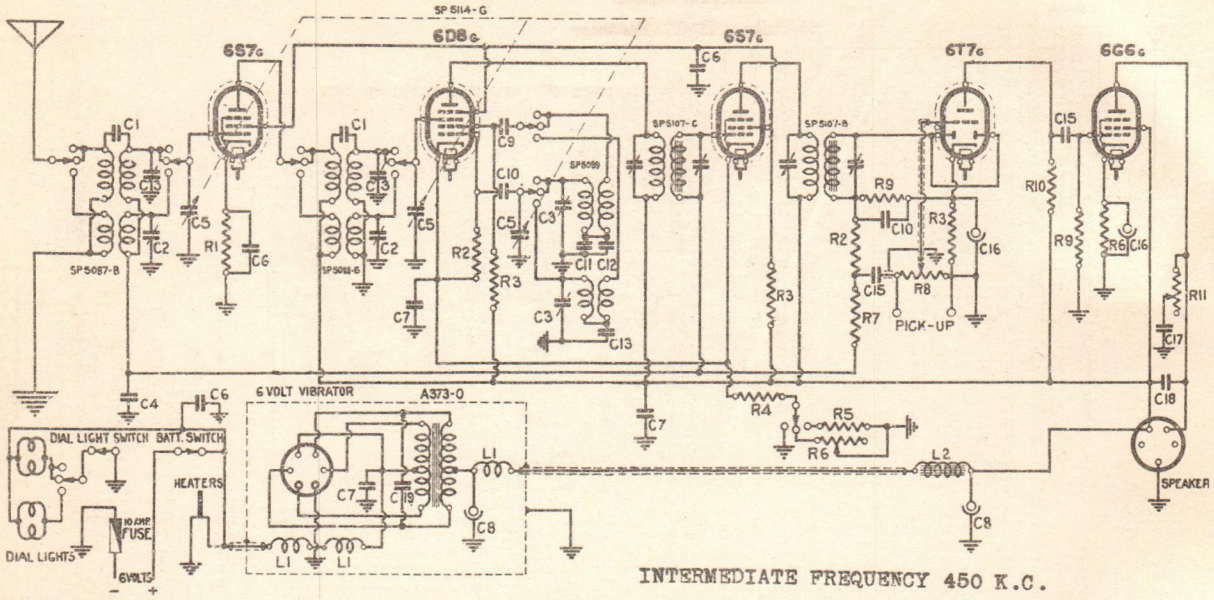
5-Valve D/W Vibrator



C1. Pigtail Cond.
C4. 0.05mf paper Con.
C6. 01mf paper Con.
C7. 0.5mf paper con.
C8. 10.0mf elec.Con.
C9. 0.001mf paper Con.
C10. 0.0001mf paper Con.
C11. Padder Condenser
C12. 0.00025-0.00028 mf mica Cond.
C13. 0.004mf mica con.
C14. 0.0005mf paper condenser
C15. 0.01mf paper con.
C16. 10.0mf elec.con.
C17. 0.1mf paper con.
C18. 0.006mf pap.Con.
C19. 0.006mf pap.Con.
R1. 300 ohms Res.W/W
R2. 50,000 ohms" 1/5W
R3. 10,000 ohms Res 1 Watt
R4. 400 ohms Res.W/W
R5. 1500 ohms " "
R6. 1200 ohm Res. Variable
R7. 1Mohm Res.1W
R8. 500,000 ohmPot.
R9. 500,000 " Res. 1/3 Watt
R10. 200,000ohm 1W
R11. 50,000 ohmPot.

S.T.C. A526-7

5-Valve D/W Vibrator

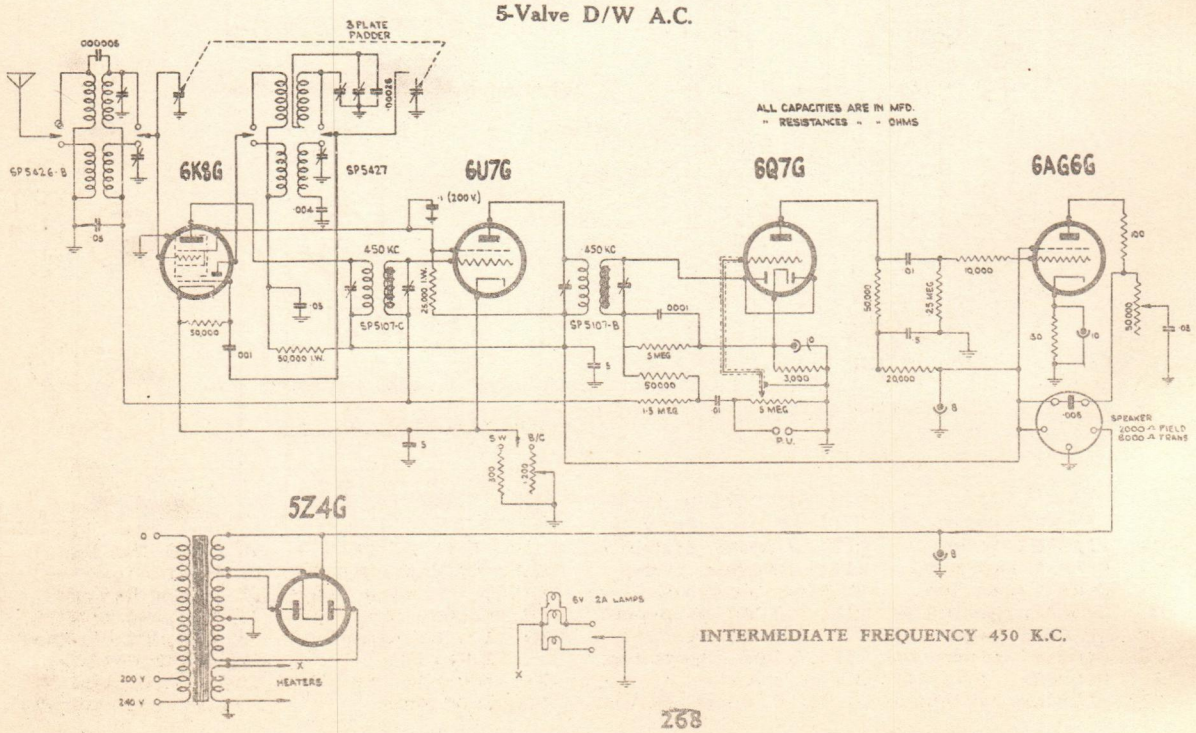


INTERMEDIATE FREQUENCY 450 K.C.

C1. Pigtail Con.
C4. 0.05mf pap.Con.
C6. 0.1mf pap.Con.
C7. 0.5mf pap.Con.
C8. 10.0mf elec.Con
C9. 0.001mf pap. "
C10. 0.0001mf pap."
C11. Padder Cond.
C12. 0.00025-0.00028 mf mica Cond.
C13. 0.004mf mica Con
C14. 0.0005mf pap. "
C15. 0.01mf pap.Con.
C16. 10.0mf elec.Con.
C17. 0.1mf pap.Con.
C18. 0.006mf pap.Con.
C19. 0.006mf pap.Con.
R1. 300 ohm Res.W/W
R2. 50,000 ohm Res. 1/3 Watt
R3. 40,000 ohm Res. 1 Watt
R4. 400 ohm Res. W/W
R5. 1500 ohm Res. W/W
R6. 1200 ohm Res. Variable
R7. 1M ohm Res. 1 Watt
R8. 500,000 ohms Pot.
R9. 500,000 ohm Res.1/3W
R10. 200,000 ohm Res.1W
R11. 50,000 Pot.

S.T.C. 528

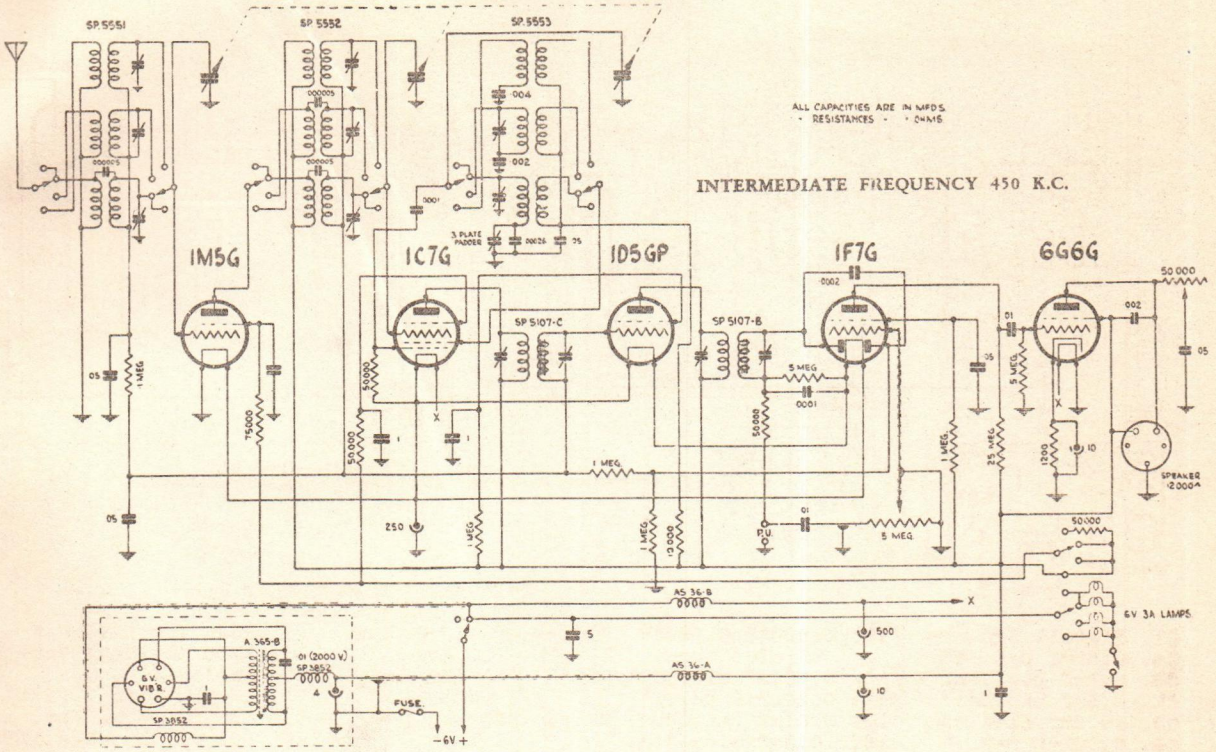
5-Valve D/W A.C.



INTERMEDIATE FREQUENCY 450 K.C.

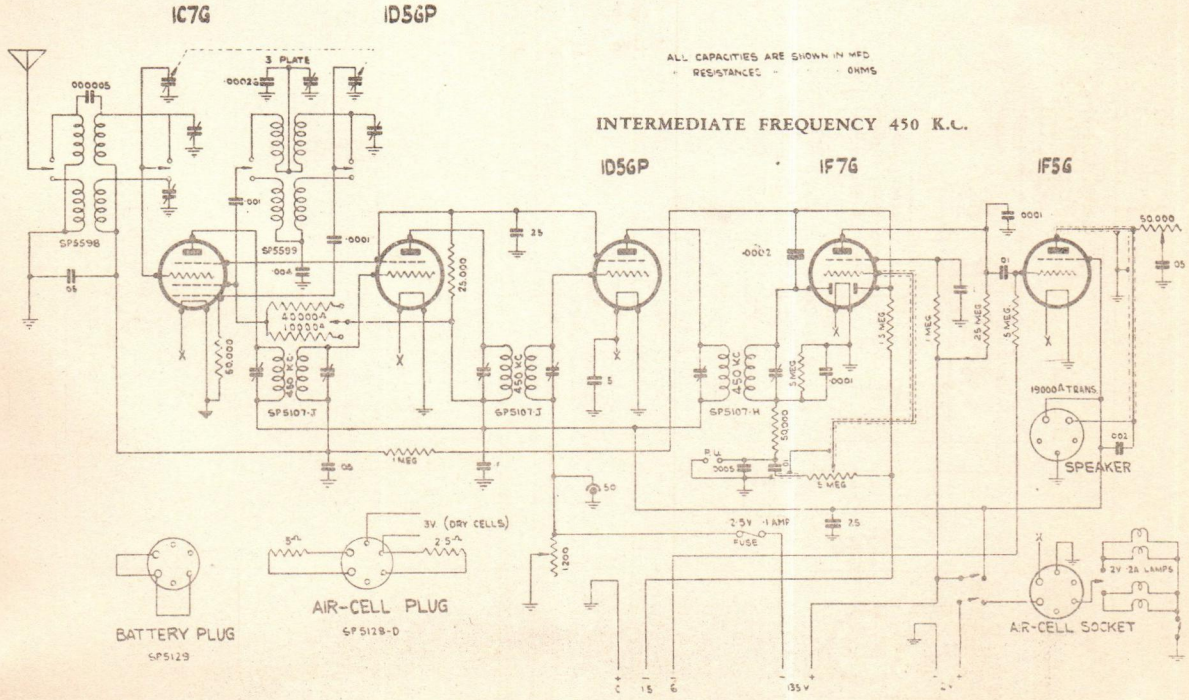
S.T.C. 530-1

5-Valve T/W Vibrator



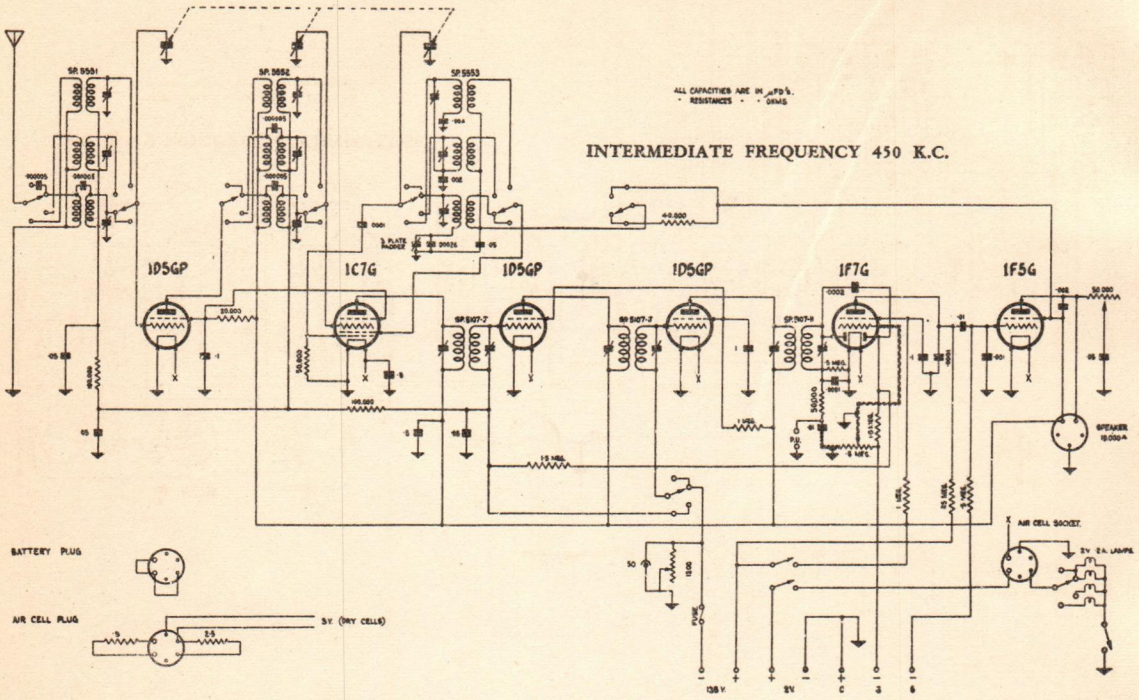
S.T.C. 540

5-Valve D/W Battery



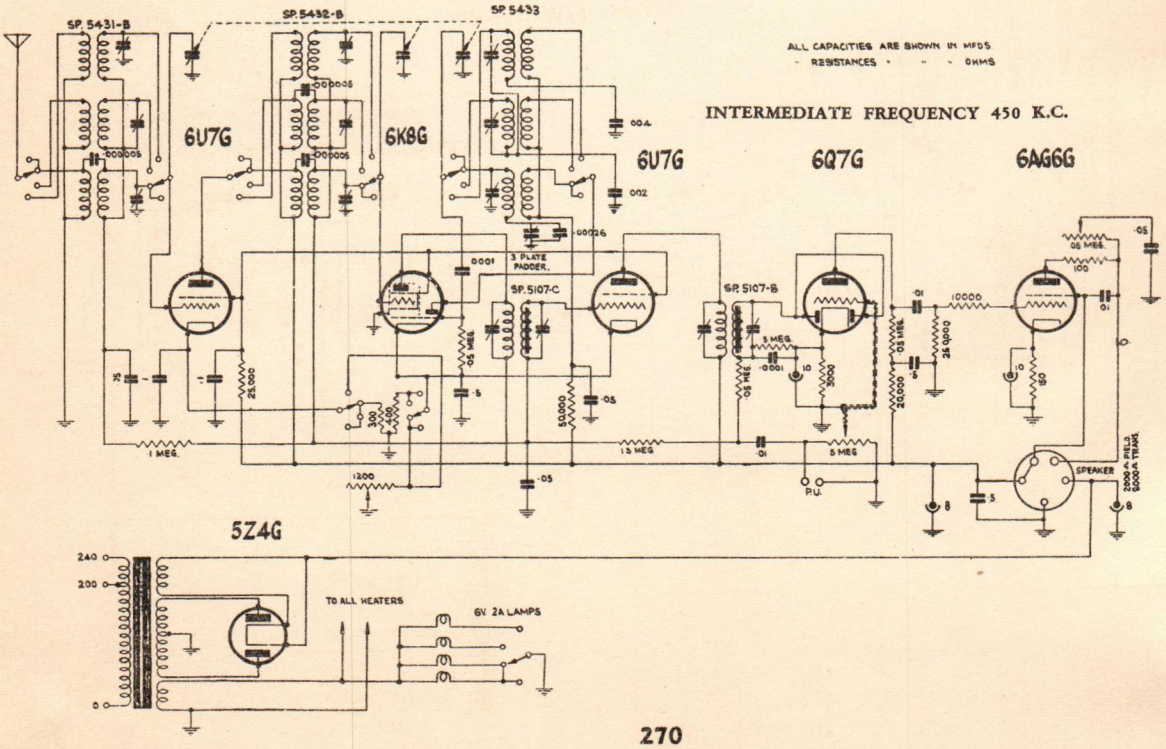
S.T.C. 631

6-Valve T/W Battery



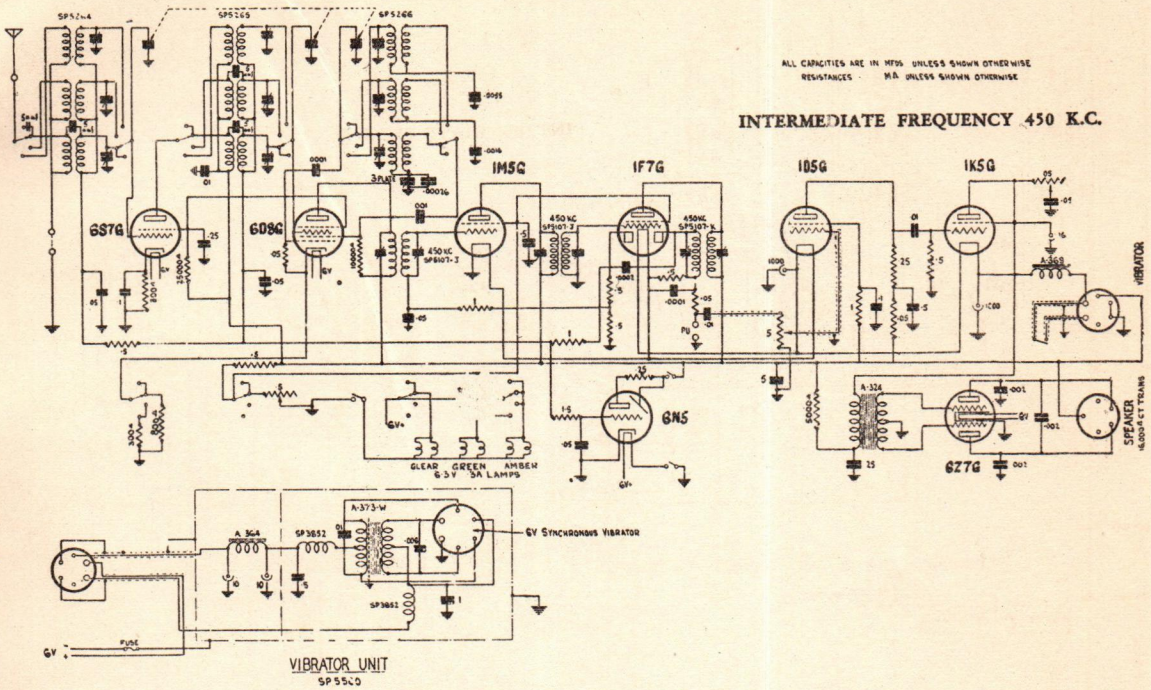
S.T.C. 632

6-Valve T/W A.C.



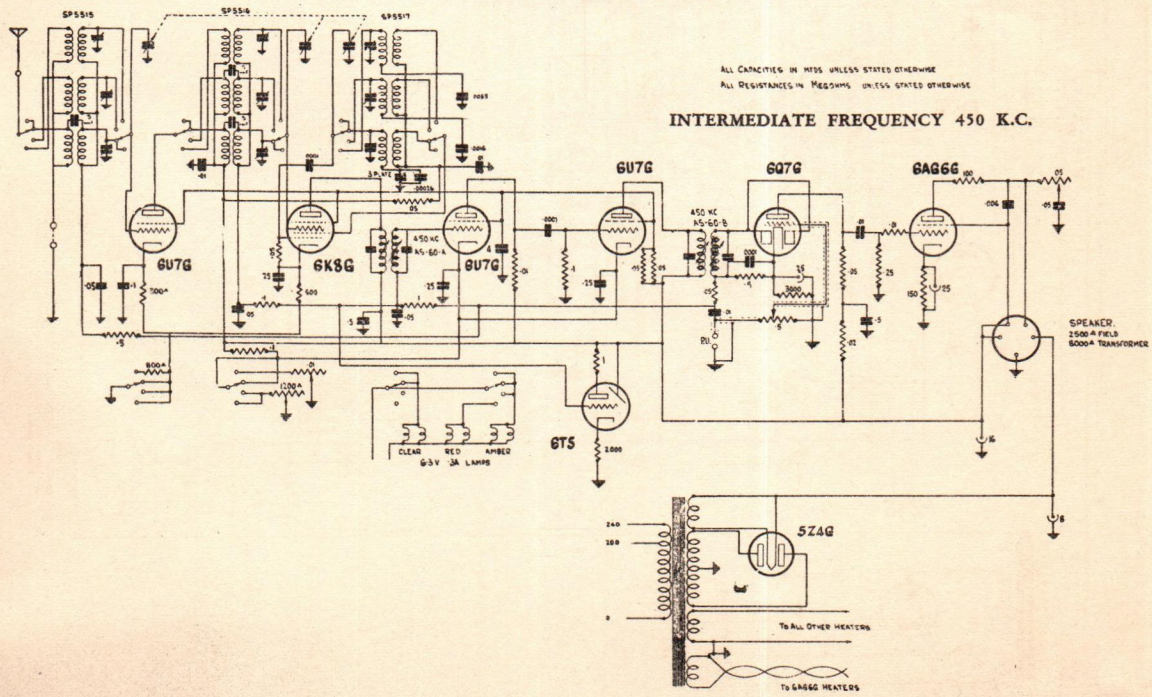
S.T.C. 732

7-Valve T/W A.C.



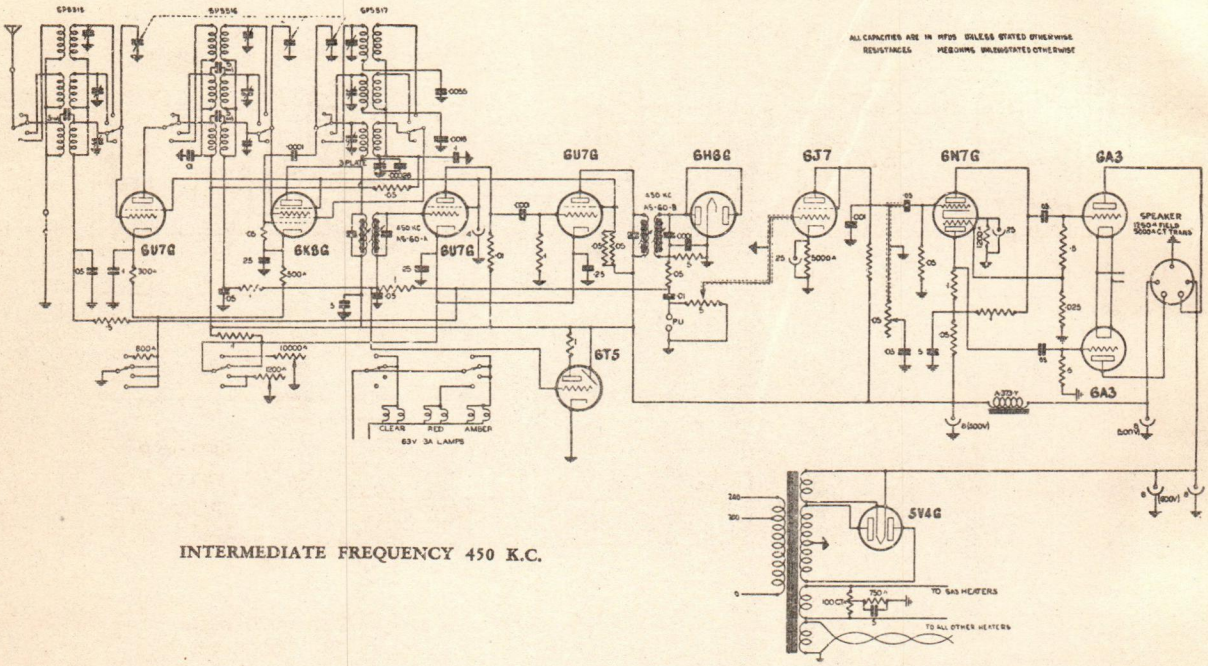
S.T.C. 734

7-Valve T/W Vibrator



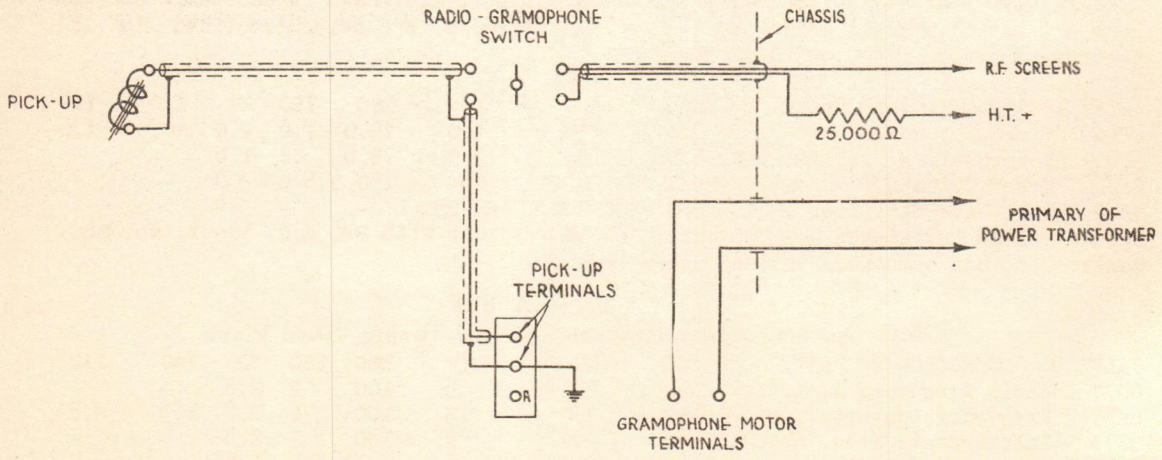
S.T.C. 1030

10-Valve T/W A.C.



INTERMEDIATE FREQUENCY 450 K.C.

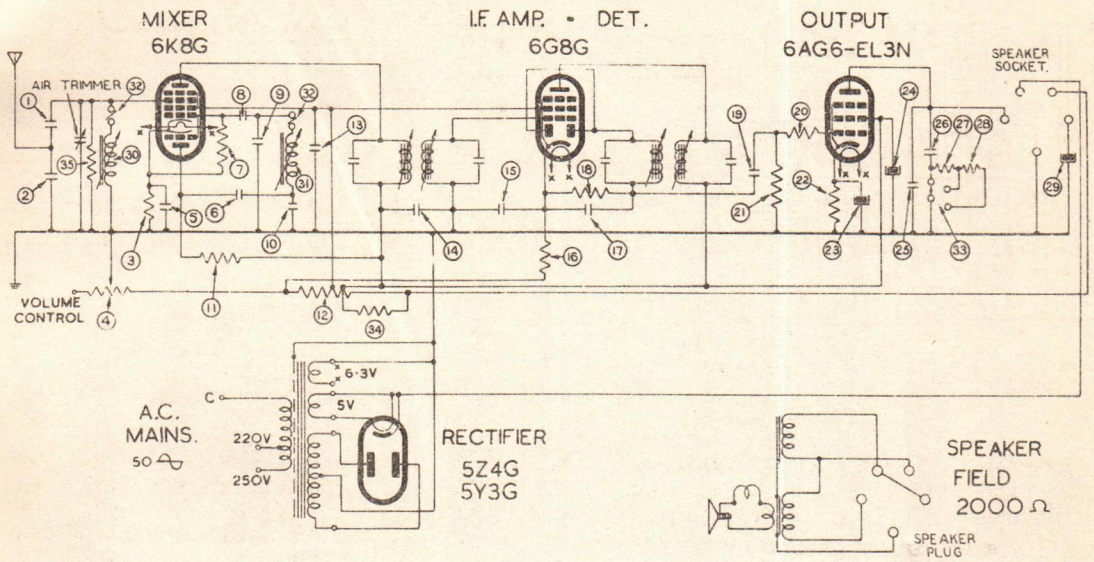
PICK-UP CIRCUIT S.T.C. RECEIVERS



TASMA RADIO

TASMA 600

A.C. Operated Superheterodyne—Automatic Tuning—Broadcast



INTERMEDIATE FREQUENCY 458KC

1. 130mmfd
2. .001mmfd
3. 180 ohms
4. 5000 ohms
5. .1mfd
6. .001mfd
7. 50,000 ohms
8. 50mmfd
9. .0005mfd
10. 250mmfd
11. 100,000 ohms
12. 15,000 ohms P.D.
13. .1mfd
14. .5mfd
15. .1mfd
16. 350 ohms
17. .00025mfd
18. .5 meg.
19. .01mfd
20. .1 meg
21. 1 meg ohms
22. 120 ohms
23. 50mfd
24. 16 mfd
25. .0005mfd
26. .05mfd
27. 5000 ohms
28. 50000 ohms
29. 8mfd
30. Aerial Coil
31. Oscillator Coil
32. Push Button Switch
33. Tone Control
34. 5000 ohms
35. 2 meg ohms

NOTE: For simplicity only one tuned circuit and switch are shown in schematic diagram. There are actually eight aerial coils, oscillator coils, and switch sections in the receiver proper.

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6.0	150.	3.0	75.0	7.0	2.0	30.0	1.0
6G8G	Intermediate Freq.Amp.Det.	6.0	150	2.5	75.0	.8	1.0	-	-
6AG6	Power Output	6.0	200.	25	150.0	6.0	4.0	-	-
5Z4G	Full-Wave Rectifier	5.0	300/300	25/25	-	-	-	-	-

Speaker Field Resistance - 2,000 ohms. Above readings with 240 A.C. input, volume control on, and one press button pushed in.

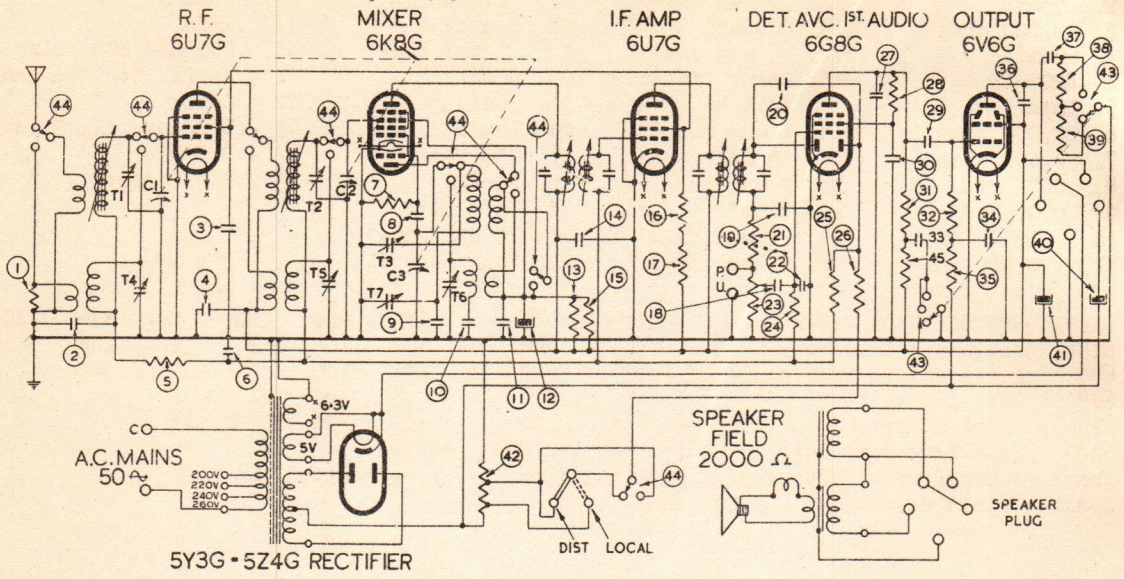
TASMA 625

A.C. Operated Superheterodyne—Manual Tuning—Dual Wave

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6U7G	Radio Frequency Amplifier	6	250	8	100	2	2.8	-	-
6K8G	Frequency Converter	6	250	3	100	6	2.8	100	3.5
6U7G	Intermediate Freq. Amp.	6	250	8	100	2	2.8	-	-
6G8G	Det. A.V.C. Audio	6	110	.6	30	.1	2.8	-	-
6V6G	Power Output	6	245	30	250	1.5	17	-	-
5Z4G	Full-Wave Rectifier	5	360/360	35/35	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V. A.C. input- no signal. Volume Control full on.

TASMA 625 (Contd.)

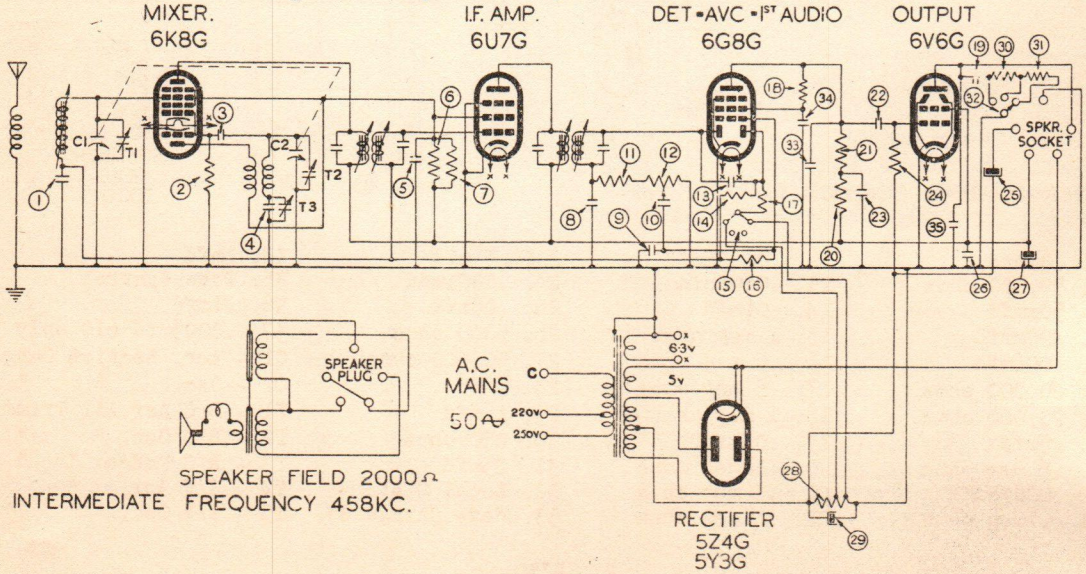


1. 500 ohms
2. .05mfd
3. .1mfd
4. .01mfd
5. .1meg ohms
6. .05mfd
7. 50,000 ohms
8. 50mmfd
9. 420mmfd
10. .006mfd
11. .1mfd
12. 8mfd
13. 30,000 ohms
14. 5mfd
15. 30,000 ohms
16. 20,000 ohms
17. 20,000 ohms
18. .01mfd
19. .00025mfd
20. .0001mfd
21. .1 meg ohms
22. .00025mfd
23. 5 meg ohms
24. 1 meg ohms
25. .5 meg ohms
26. .5 meg ohms
27. .0001mfd
28. 1 meg ohms
29. .01mfd
30. .1mfd
31. 50,000 ohms
32. .5 meg ohms
33. .01mfd
34. .1mfd
35. 50,000 ohms
36. .004mfd
37. .05mfd
38. 10,000 ohms
39. 50,000 ohms
40. 8mfd
41. 16mfd
42. 250 ohms
43. Tone Control
44. Wave Change
45. .15 meg ohms

C1 - Aerial Section Gang
C2 - R.F. " "
C3 - Osc. " "
T1 - B/C Aer. Air Trimmer
T2 - B/C R.F. " "
T3 - B/C Osc. " "
T4 - S/W Aerial " "
T5 - S/W R.F. " "
T6 - S/W Osc.
T7 - [illegible] Padder

TASMA 605C

A.C. Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

TASMA 605C (Contd.)

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. 1mfd
6. 20,000 ohms
7. 20,000 ohms
8. .00025mfd
9. .00025mfd
10. .01mfd
11. 100,000 ohms
12. .5 meg ohms
13. .0001mfd
14. .5 meg ohms
15. Local Distance Switch
16. 1 meg ohms
17. .5 meg ohms
18. 1 meg ohm
19. .05mfd
20. .1 meg ohms
21. .1 meg ohms
22. .01mfd
23. 5 mfd
24. .5 meg ohms
25. 8mfd
26. .5mfd
27. 16mfd
28. 250 ohms
29. 25mfd
30. 5000 ohms
31. 50,000 ohms
32. Tone Control
33. .0001mfd
34. .1mfd
35. .0005mfd 605 only

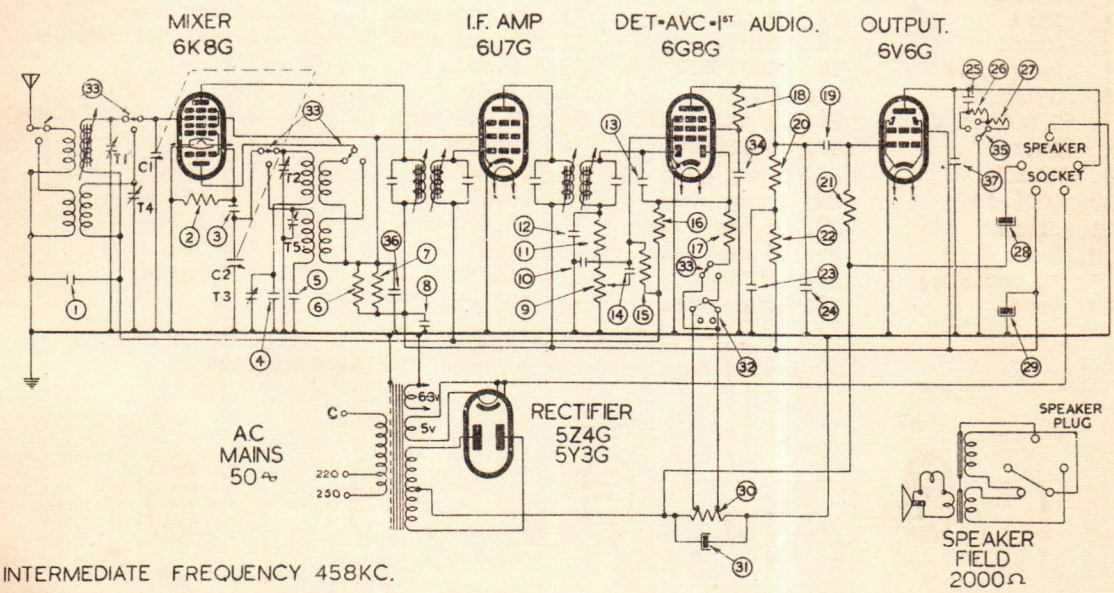
C1 - Aerial Section Gang
C2 - Osc. " "
T1 - B/C Aer. Air Trimm.
T2 - B/C Osc. " "
T3 - B/C Padder" "

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Above readings with 240V. A.C. input - no signal. Volume control on.
Speaker Field Resistance - 2,000 ohms.

TASMA 610C

A.C. Operated Superheterodyne—Manual Tuning—Dual Wave



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. .006mfd
6. 20,000 ohms
7. 20,000 ohms
8. .5mfd
9. .5 meg ohms
10. .00025mfd
11. .1meg ohms
12. .00025mfd
13. .0001mfd
14. .01mfd
15. 1 meg ohms
16. .5 meg ohms
17. .5 meg ohms
18. 1 meg ohms
19. .01mfd
20. .1 meg ohms
21. .5 meg ohms
22. .1 meg ohms
23. .5 mfd
24. .0001mfd
25. .05mfd
26. 5000 ohms
27. 50,000 ohms
28. 8mfd
29. 16mfd
30. 250 ohms
31. 25mfd
32. Local Dist.
33. Wave Change SW.
34. 1mfd
35. Tone Control
36. .1mfd
37. .0005mfd 610 only

C1 - Aer. Section Gang
C2 - Osc. " "
T1 - B/C Aer.Air Trimm.
T2 - B/C Osc. " "
T3 - B/C Padder " "
T4 - S/W Aer. " "
T5 - S/W Osc. " "

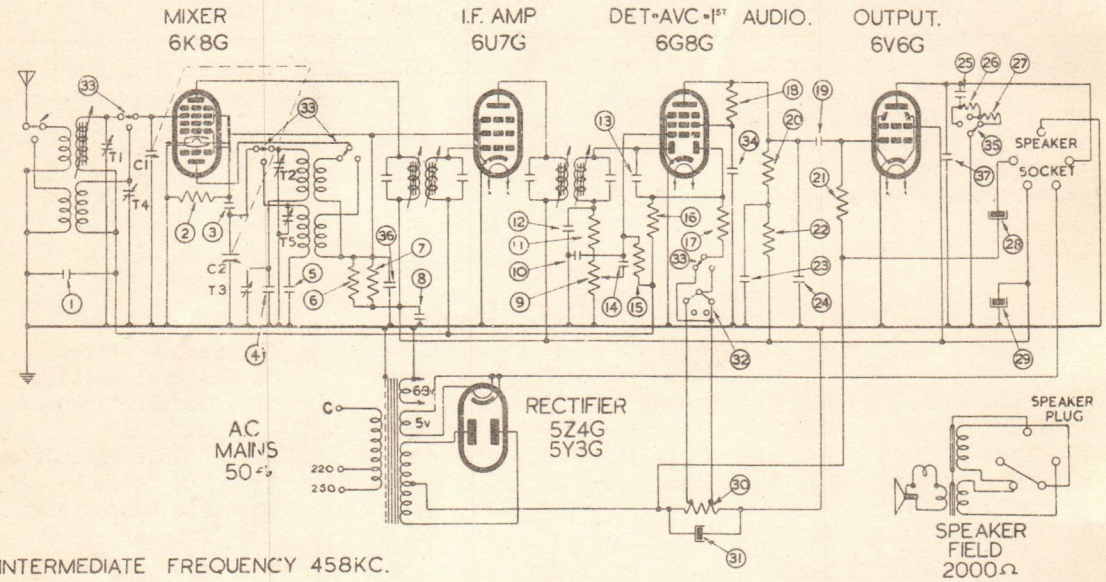
TASMA 610C (Contd.)

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Above readings with 240V. A.C. input - no signal. Volume control on.
Speaker Field Resistance - 2,000 ohms.

TASMA 610

A.C. Operated Superheterodyne Manual Tuning-Dual-Wave



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. .006mfd
6. 20,000 ohms
7. 20,000 ohms
8. .5mfd
9. .5meg ohms
10. .00025mfd
11. .1 meg ohms
12. .00025mfd
13. .0001mfd
14. .01mfd
15. 1 meg ohms
16. .5 meg ohms
17. .5 meg ohms
18. 1 meg ohms
19. .01mfd
20. .1 meg ohms
21. .5 meg ohms
22. .1 meg ohms
23. .5mfd
24. .0001mfd
25. .05mfd
26. 5000 ohms
27. 50,000 ohms
28. 8mfd
29. 16mfd
30. 250 ohms
31. 25mfd
32. Local Dist.
33. Wave Change SW.
34. 1mfd
35. Tone Control
36. .1mfd
37. .0005mfd 610 only
C1 - Aer.Section Gang
C2 - Osc. " "
T1 - B/C Aer.Air Trim
T2 - B/C Osc. " "
T3 - B/C Padder " "
T4 - S/W Aer. " "
T5 - S/W Osc. " "

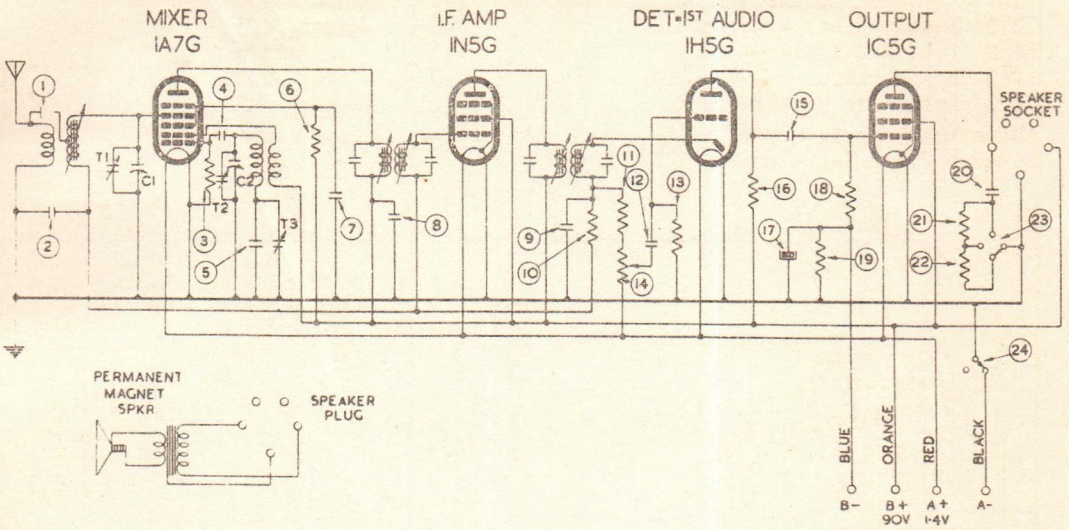
VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6K8G	Frequency Converter	6	220	3.4	105	6	2	105	3.5
6U7G	Intermediate Freq.Amp.	6	220	11	105	3	2	-	-
6G8G	Det. AVC Audio	6	75	.5	40	.1	2	-	-
6V6G	Power Output	6	212	30	220	1.5	15	-	-
5Z4G	Full-Wave Rectifier	5	320/320	30/30	-	-	-	-	-

Speaker Field Resistance - 2,000 ohms

Above readings with 240V. A.C. input - no signal.
Volume control on.

TASMA 675C

Battery-Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

1. .0005mfd
2. .05mfd
3. .25meg ohms
4. 50mmfd
5. 390mmfd
6. 50,000 ohms
7. .1mfd
8. 5mfd
9. .00025mfd
10. 1meg ohms
11. 50,000 ohms
12. .01mfd
13. 1meg ohms
14. 5 meg ohms
15. .01mfd
16. 25 meg ohms
17. 25mfd
18. 5 meg ohms
19. 750 ohms
20. .05mfd
21. 5000 ohms
22. 50,000 ohms
23. Tone Control
24. On-Off Switch

C1 - Aerial Section Gang
C2 - Oscillator Section Gang
T1 - B/C Aer.Air Trimmer
T2 - B/C Osc. " "
T3 - B/C Padder Air Trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
1A7G	Frequency Converter	1.4	83	.4	40	.3	-	83.0	1.0
1N5G	Intermediate Freq.Amp.	1.4	83.0	1.0	83	.3	-	-	-
1H5G	Det., AVC Audio	1.4	60.0	.04	-	-	-	-	-
1C5G	Power Output	1.4	80.0	5.0	83	1.2	7.0	-	-

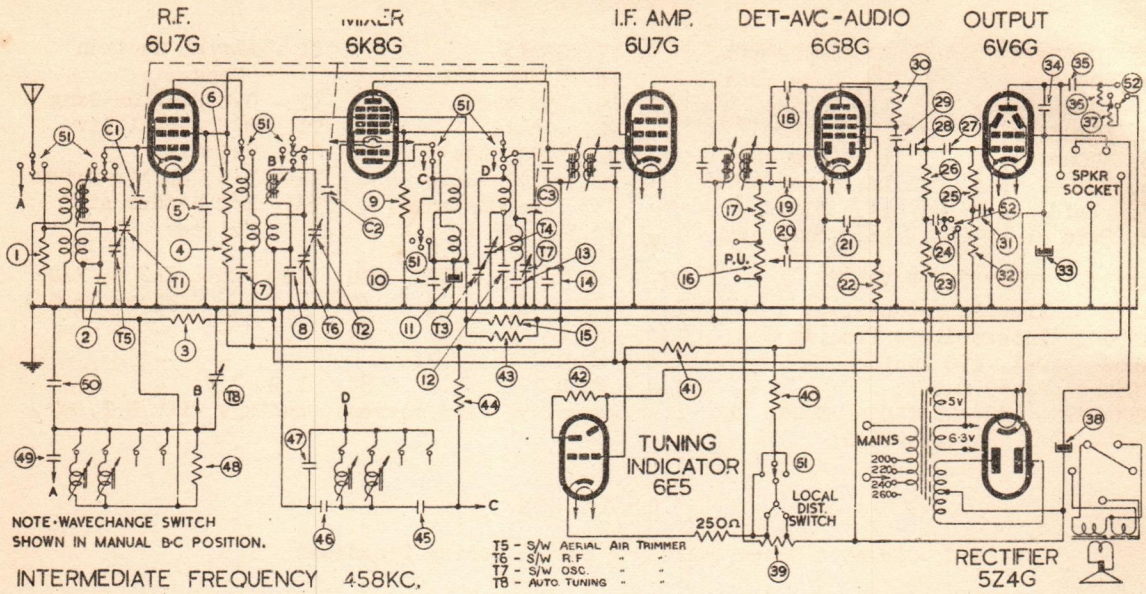
SPEAKER - Permagnetic. NOTE:- Above shows voltage and current readings with H.T. 90 volts from "B" Batteries.

TASMA 630

A.C. Operated Superheterodyne Manual-Automatic Tuning-Dual Wave

1. 500 ohms
2. .05mfd
3. .1meg ohms
4. 20,000 ohms
5. .1mfd
6. 20,000 ohms
7. .01mfd
8. .05mfd
9. 50,000 ohms
10. .1mfd
11. 8mfd
12. 420mmfd
13. .006mfd
14. .5mfd
15. 30,000 ohms
16. .5meg ohms Pot
17. .1meg ohms
18. .0001mfd
19. .00025mfd
20. .01mfd
21. .00025mfd
22. 1meg ohms
23. 50,000 ohms
24. .01mfd
25. .5meg ohms
26. .15 meg ohms
27. .01mfd
28. .0001mfd
29. .1mfd
30. 1meg ohms
31. .1mfd
32. 50,000 ohms
33. 16mfd
34. .004mfd
35. .05mfd
36. 10,000 ohms
37. 50,000 ohms
38. 8mfd
39. 250 ohms
40. .5meg ohms
41. .5meg ohms
42. 1meg ohms
43. 30,000 ohms
44. .1meg ohms
45. .001mfd
46. .00025mfd
47. .0005mfd
48. 2 meg ohms
49. 130mmfd
50. .001mfd
51. Wave Change
52. Tone Control

C1 - Aer.Section Gang
C2 - R.F " "
C3 - Osc. " "
T1 - B/C Aer.Air Trimm
T2 - B/C R.F. " "
T3 - B/C Osc. " "
T4 - B/C Padder " "



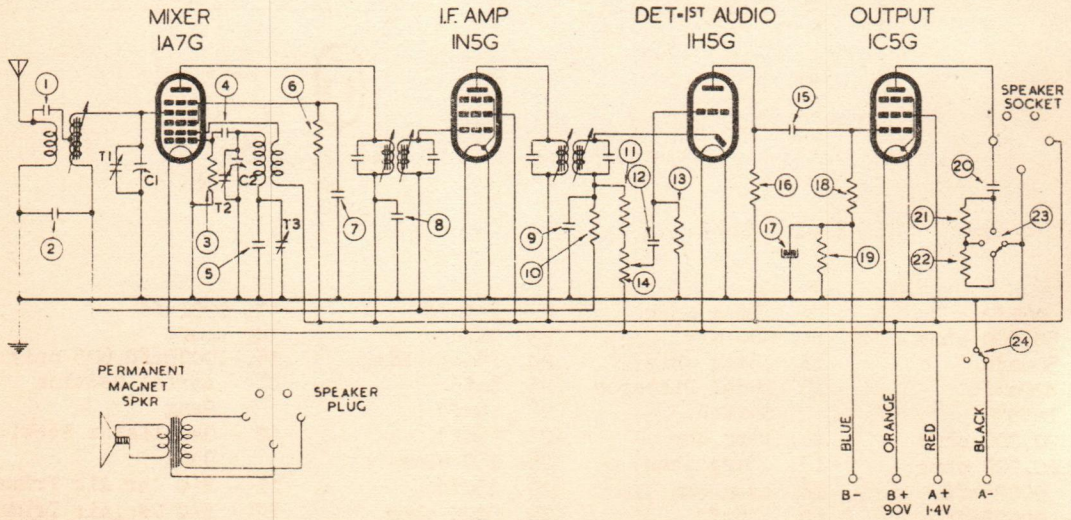
INTERMEDIATE FREQUENCY 458KC.

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
6U7G	Radio Frequency Amp.	6	250	8	100	2	2.8	-	-
6K8G	Frequency Converter	6	250	3	100	6	2.8	100	3.5
6U7G	Intermediate Freq.Amp.	6	250	8	100	2	2.8	-	-
6G8G	Det. AVC Audio	6	110	.6	30	.1	2.8	-	-
6V6G	Power Output	6	245	30	250	1.5	17	-	-
5Z4G	Full-Wave Rectifier	5	360/360	35/35	-	-	-	-	-
6U5	Tuning Indicator	6	20	.25	-	-	-	-	-

SPEAKER FIELD RESISTANCE - 2,000 ohms. Above readings with 240V. A.C input- no signal. Volume control on.

TASMA 675

Battery-Operated Superheterodyne Manual Tuning-Broadcast



INTERMEDIATE FREQUENCY 458KC.

1. .0005mfd
2. .05mfd
3. .25meg ohms
4. 50mmfd
5. 390mmfd
6. 50,000 ohms
7. .1mfd
8. 5mfd
9. .00025mfd
10. 1meg ohms
11. 50,000 ohms
12. .01mfd
13. 1meg ohms
14. 5 meg ohms
15. .01mfd
16. 25meg ohms
17. 25mfd
18. 5 meg ohms
19. 750 ohms
20. .05mfd
21. 5000 ohms
22. 50,000 ohms
23. Tone Control
24. On-off switch

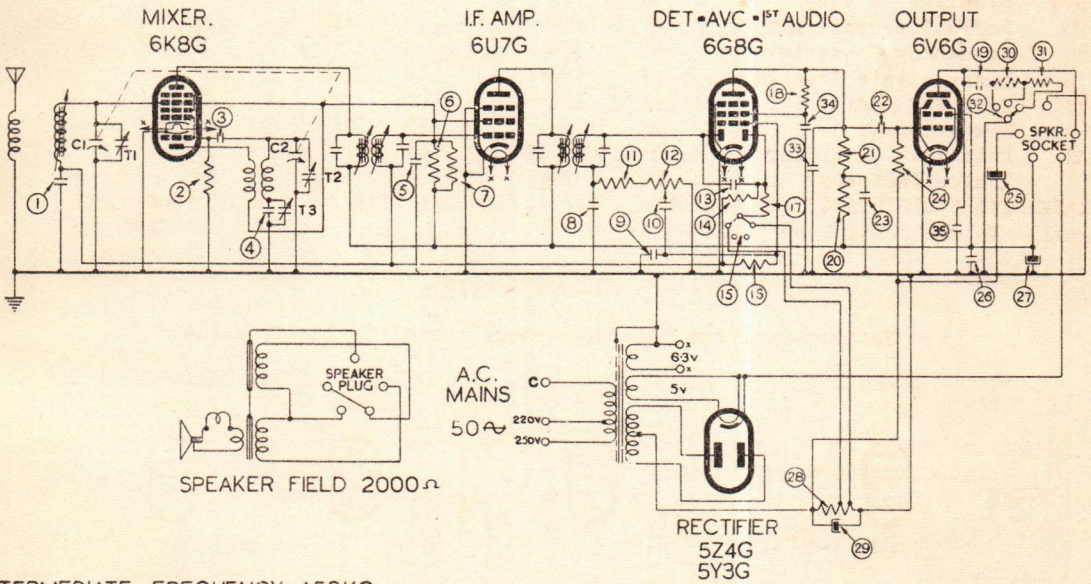
C1 - Aerial Section Gang
C2 - Osc.Section Gang
T1 - B/C Aerial Air Trimmer
T2 - B/C Osc.Air Trimm
T3 - B/C Padder Air Trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
1A7G	Frequency Converter	1.4	83	.4	40	.3	-	83.0	1.0
1N5G	Intermediate Freq.Amp.	1.4	83.0	1.0	83	.3	-	-	-
1H5G	Det. AVC Audio	1.4	60.0	.04	-	-	-	-	-
1C5G	Power Output	1.4	80.0	5.0	83	1.2	7.0	-	-

SPEAKER - PERMAGNETIC. NOTE: Above shows voltage and current readings with H.T. 90 volts from "B" batteries.

TASMA 605

A.C. Operated Superheterodyne Manual Tuning-Broadcast



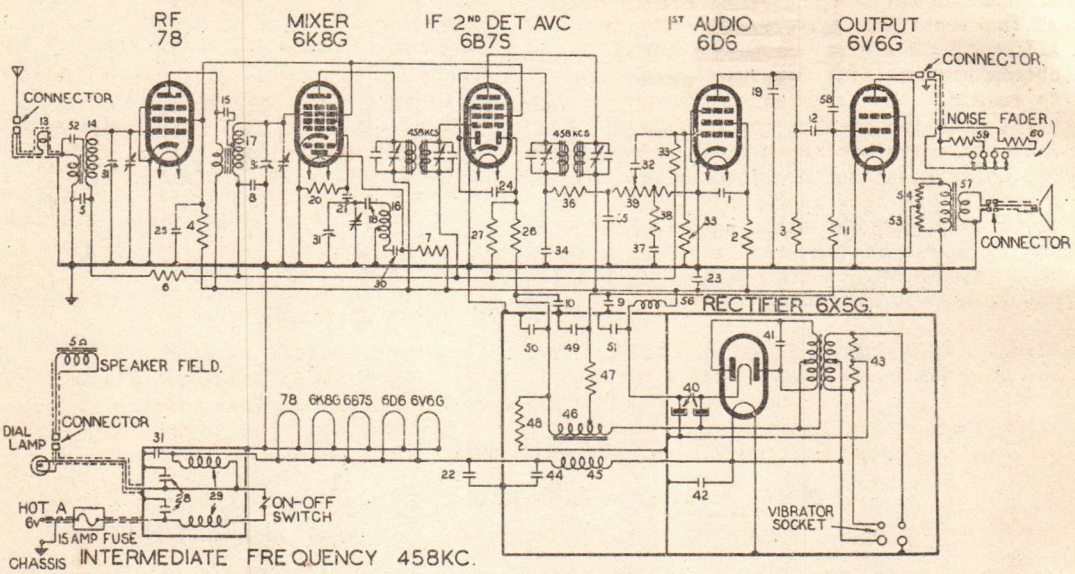
INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. 50,000 ohms
3. 50mmfd
4. 420mmfd
5. 1mfd
6. 20,000 ohms
7. 20,000 ohms
8. .00025mfd
9. .00025mfd
10. .01mfd
11 100,000 ohms
12. .5meg ohms
13. 0001mfd
14. .5meg ohms
15. Local Distance Switch
16. 1meg ohm
17. .5meg ohms
18. 1meg ohm
19. .05mfd
20. .1meg ohm
21. .1meg ohm
22. .01mfd
23. 5mfd
24. .5meg ohms
25. 8mfd
26. .5mfd
27. 16mfd
28. 250 ohms
29. 25mfd
30. 5000 ohms
31. 50,000 ohms
32. Tone Cont.
33. 0001mfd
34. .1mfd
35. .0005mfd 605 only

C1 - Aerial Section Gang
C2 - Oscillator Section Gang
T1 - B/C Aer.Air Trimm.
T2 - B/C Osc.Air Trimm.
T3 - B/C Padder Air Trimmer

TASMA 620

Auto Radio 6-Valve Broadcast Superheterodyne for 6-Volt Operation



1. .1mfd
2. 1megohm
3. .25megohm
4. 25,000 ohms
5. .05mfd
6. .1megohm
7. 50,000 ohms
8. .05mfd
9. .1mfd
10. .1mfd
11. 1megohm
12. .01mfd
13. Aerial Ignition Fil.
14. Aer.Coil
15. 15mmfd
16. Osc.Coil
17. R.F.Coil
18. 390mmfd
19. .00025mfd
20. 50,000 ohms
21. .00005mfd
22. .5mfd
23. .1mfd
24. .00025mfd
25. .1mfd
26. .5megohm
27. .5megohm
28. .004mfd
29. R.F C.L.T.
30. .0005mfd
31. .00025mfd
32. .01mfd
33. .5megohm
34. .00025mfd
35. .00025mfd
36. .1megohm
37. .004mfd
38. 50,000 ohm
39. On-Off Switch .1meg pot.
40. 8+8mfd
41. .004mfd
42. .5mfd
43. 200 C.T.
44. .00025mfd
45. R.F.C. L.T.
46. H.T. Filter Choke
47. .5megohm
48. 65 ohm
49. .004mfd
50. .004mfd
51. .004mfd
52. .00025mfd
53. 25000 ohms
54. .1megohm
55. Rect.Socket
56. RFC - H.T.
57. Spkr.Transformer
58. .05mfd
59. 10,000 ohms
60. 25,000 ohms

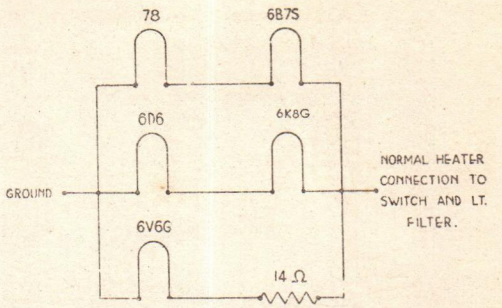
VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
78	Radio Frequency Amplifier	5.5	220	5	80	1.25	2.25	-	-
6K8G	Mixer	5.5	220	1.8	80	3.25	2.65	80	1.75
6B7S	2nd det.,AVC,I.F.Amp	5.5	220	6	80	1.25	2.25	-	-
6D6	Audio Amplifier	5.5	50	.75	40	.25	2.25	-	-
6V6G	Output	5.5	205	40	220	1	16	-	-
6X5G	Rectifier	5.5	250/250	28/28	-	-	-	-	-

Current drain 6-volt operation: 5 ohms electro magnet speaker, 5.7 amps.
Current drain 12-volt operation: 20 ohms electro magnet speaker, 3.4 amps.

REMOVAL OF CHASSIS FROM METAL CASE. To remove the receiver from the metal housing, unscrew the 4 self-tapping screws located on the top and bottom flange of the front panel, and the one on the side of the metal housing near the aerial socket; also the two remote control bushes on the right hand side of the housing. The front panel with chassis and vibrator supply unit attached should now slide out of the housing.
When replacing the receiver in the housing it is important to remember that the remote control bush, with the slot turned in the hexagonal collar, is fitted to the volume control. The Vibrator B supply unit may be removed from the receiver by unscrewing the screws marked x in the diagrams, and unsoldering the four leads from the unit. One side of the unit will be found removable; when this has been removed, the small B sup-

ply unit chassis will slip out, giving easy access for service and/or the replacement of the rectifier valve or the vibrator.

ALIGNMENT OF AERIAL TRIMMING CONDENSER. To obtain maximum efficiency it is necessary to readjust the trimming condenser, on the aerial section of the gang condenser to suit the aerial on which it is being used. Two holes have been provided in the case to facilitate this adjustment one on the front panel for the aligning screwdriver, and the other on the top for guidance-each hole being covered with a small disc held firmly by a self-tapping screw.



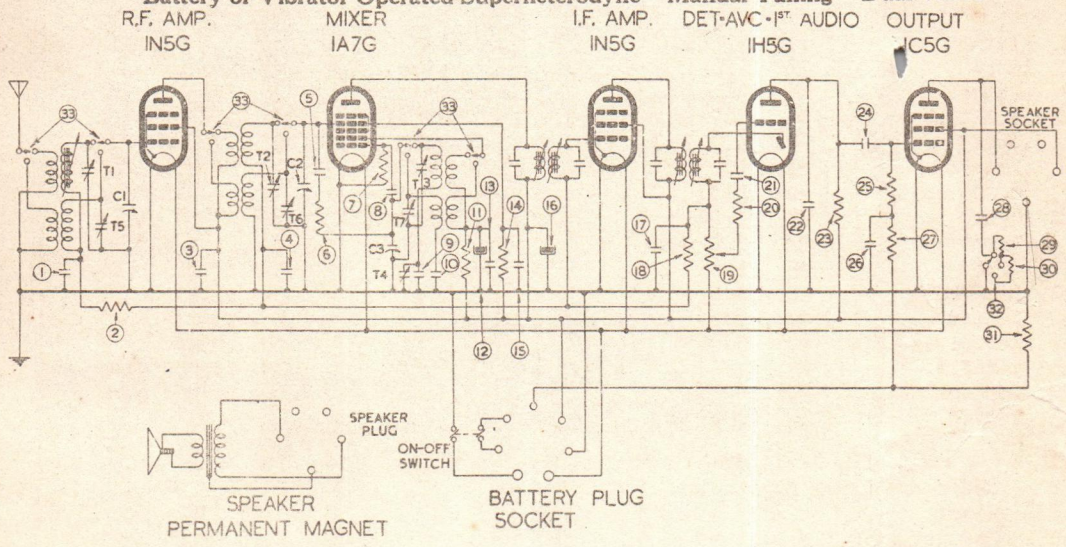
Showing heater connections for 12-volt operation.

12-VOLT OPERATION.

For 12-volt operation the heater wiring is modified as shown in the above diagram. Rectifier type 0Z4 is used together with a 12-volt vibrator and transformer; also, Resistor No. 43 in schematic is changed to 400 ohms C.T. The auto. remote control tuning indicator lamp is also changed to a 12-volt type.

TASMA 685

Battery or Vibrator Operated Superheterodyne—Manual Tuning—Dual Wave



INTERMEDIATE FREQUENCY 458KC.

1. .05mfd
2. .1megohm
3. .05mfd
4. .05mfd
5. 2mmfd
6. 1000 ohms
7. .25megohm
8. 50mmfd
9. 390mmfd
10. .006mfd
11. 2000 ohms
12. 24mfd
13. .05mfd
14. 50,000 ohms
15. .1mfd
16. 24mfd
17. .00025mfd
18. .5megohm
19. 5megohm
20. 50,000 ohm
21. .01mfd
22. .00025mfd
23. 25megohm
24. .01mfd
24. .5megohm
26. .1mfd
27. .5megohm
28. .05mfd
29. 5000 ohms
30. 50,000 ohm
31. 700 ohms
32. Tone Cont.
33. Wave Change

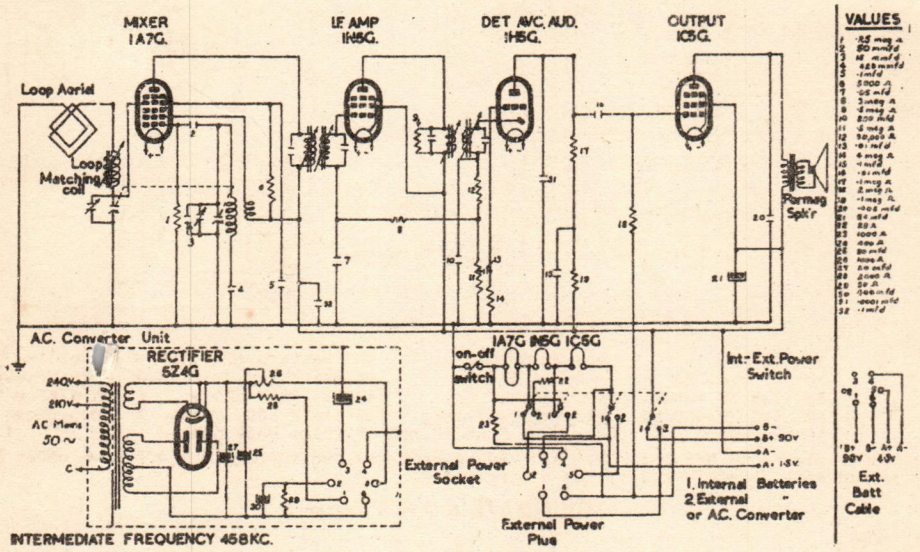
C1 - Aerial Section Gang
C2 - R.F. Sect. Gang
C3 - Osc. Sect. Gang

T1 - B/C Aerial Air trimmer
T2 - B/C R.F. Air trim.
T3 - B/C Osc. air trimm.
T4 - B/C Padder air trimmer
T5 - S/W Aerial air trimmer
T6 - S/W R.F. air trimmer
T7 - S/W Oscillator air trimmer

VALVE	FUNCTION OF VALVE	EF	EP	IP	ESG	ISG	EG	EAG	IAG
1N5G	Radio Freq. Amplifier	1.4	83	1	83	.25	-	-	-
1A7G	Freq. Converter	1.4	83	.5	45	.7	-	80	.75
1N5G	Inter. Freq. Amp.	1.4	83	1	83	.3	-	-	-
1H5G	Det. AVC Audio	1.4	60	.04	-	-	-	-	-
1C5G	Power Output	1.4	80	5	83	1.0	7.0	-	-

Speaker- Permagnetic.
NOTE: Above shows voltage and current readings with H.T. 90 volts from "B" batteries.
Tuning Range - 540 K.C. - 1700 K.C. 50M - 16M.

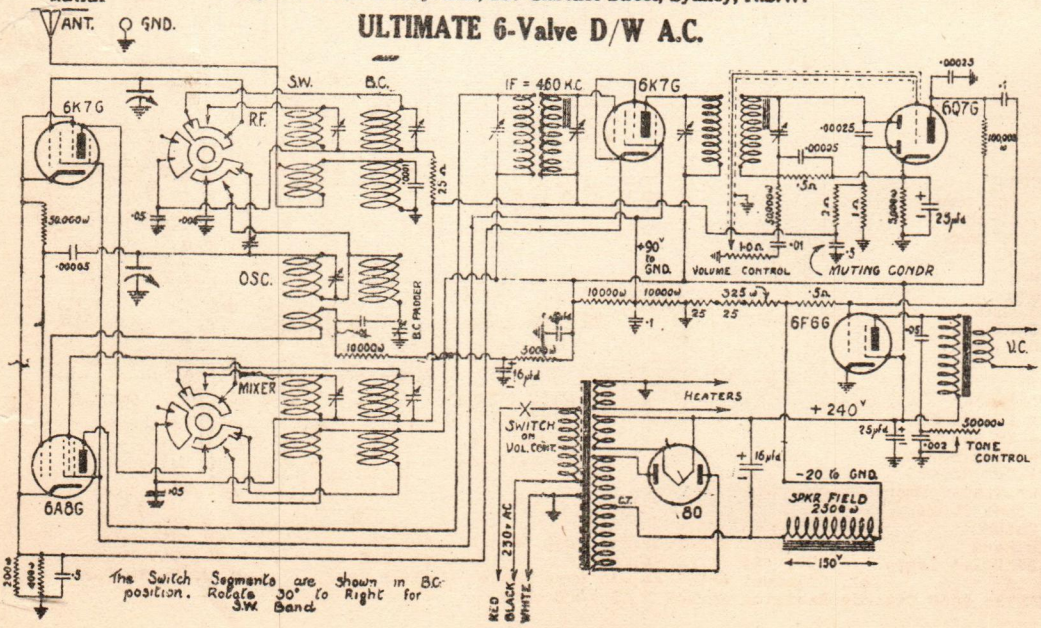
TASMA 676 PORTABLE



ULTIMATE RADIO

Sole Australian Concessionaires:
George Brown & Co. Pty. Ltd., 267 Clarence Street, Sydney, N.S.W.

ULTIMATE 6-Valve D/W A.C.

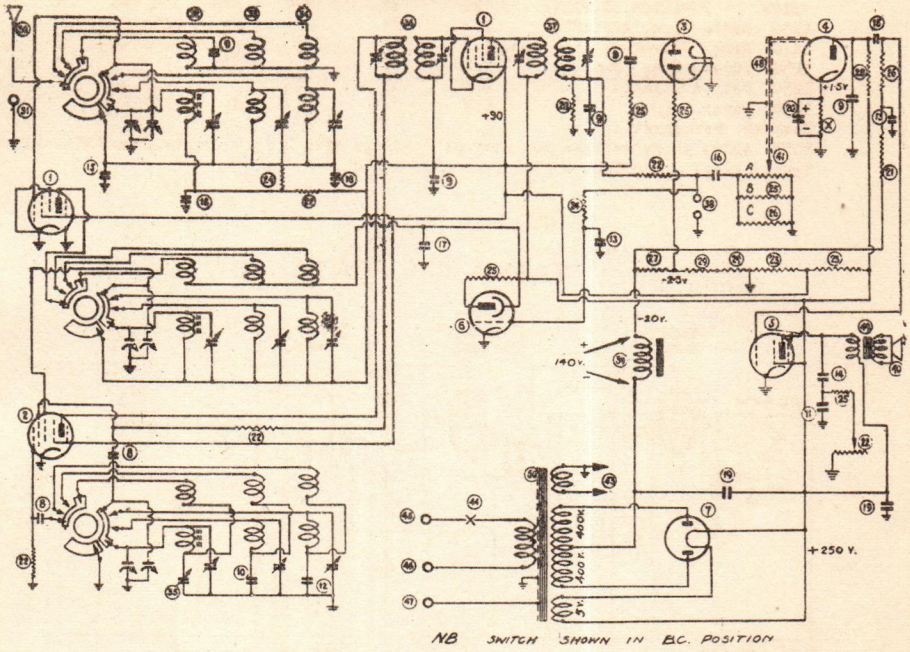


ULTIMATE 8-Valve AW

VALVES.
1. 6K7
2. 6K8
3. 6H6
4. 6F5
5. 6F6
6. 6U5 Magic Eye
7. 90

CONDENSERS
8. .00005
9. .0001
10. .0015
11 .002
12 .004
13 .02
14 .04
15 .05
16 .1
17 .25
18 .5
19 16mfd
20 25mfd 25V

RESISTORS
21 100,000
22 50,000
23 10,000
24 2 meg.
25 1 meg
26 ½ meg.
27 325
28 ¼ meg.
29 25



NB SWITCH SHOWN IN BC. POSITION

GENERAL.
30. Ant.
31 Gnd.
32 BC
33 Med.
34 SW
35 BC Pad.TB5
36 1st IF 450 KC
37 2nd IF 460 KC
38 Pickup
39. 2500 ohms Spkr. field
40 Speaker
41 Vol.Cont.1meg.
42. Tone Cont.50,000
43. Heaters &Fil.63V
44.Switch on Vol.Con.
45.Red 230V Cable
46.Black 230V Cable
47.White 230V Cable
48.Shielding
49.Spkr.Transformer
50.Shielding (Station)
X 2000 ohms

AMENDMENTS: 6J7 replaced by 6F5 from 18.4.39. 6J7 screen was fed through 500,000 from other RF screens by passed with .25mfd - A.B.C. now a single ¼ w.

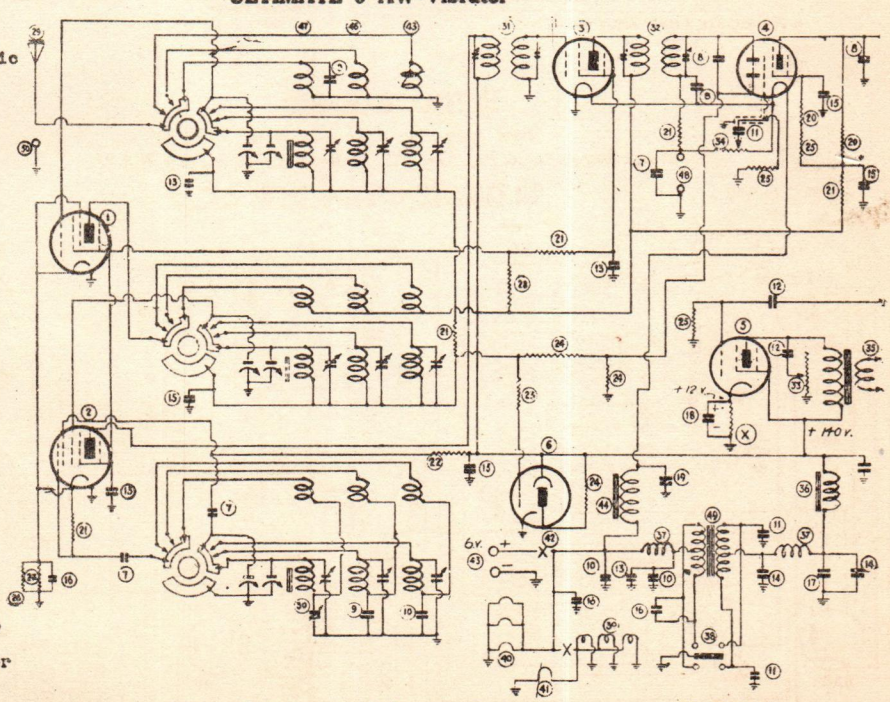
ULTIMATE 6 AW-Vibrator

VALVES.
1.6S7G 2. 6K8G
3.1A4T 4. 1F6
5.6G6G 6. 6U6 Magic Eye

CONDENSERS.
7. .00005
8. .0001
9. .0015
10 .004
11 .01
12 .02
13 .05
14 .10
15 .25
16 .5
17 10mfd
18 25mfd
19 300mfd

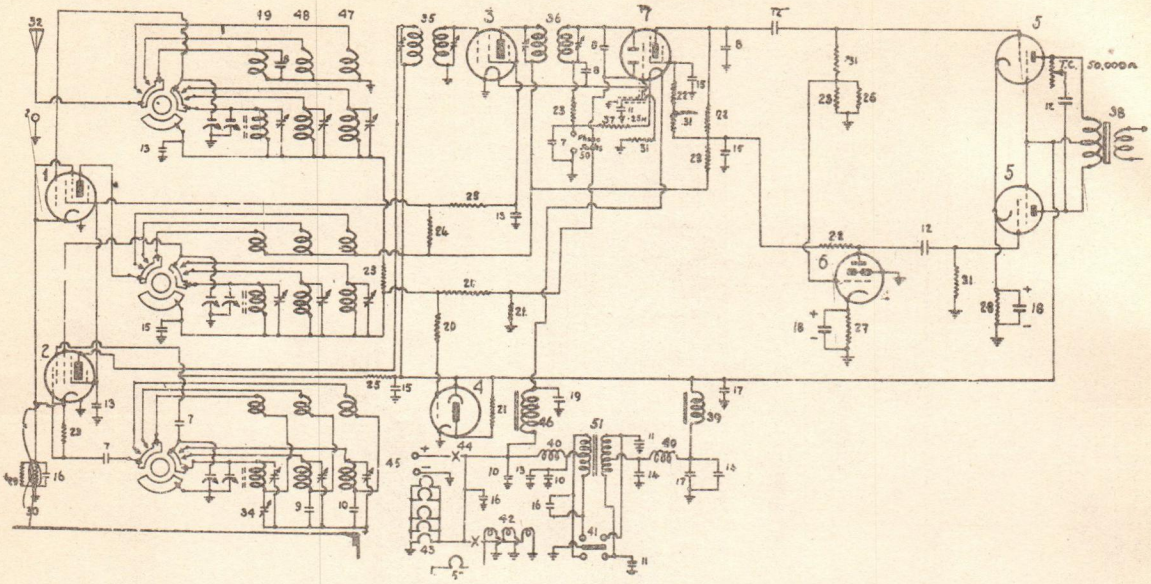
RESISTORS
20. 25[illegible],000 ohms
21. 50,000 ohms
22. 20,000 ohms
23. 4 meg.
24. 1 meg
25. ½ meg.
26. 400 ohms
27. 300 ohms
28. 25000 ohms

GENERAL.
29. ANT
30. TB5 Padder
31. 1st IF 460 KC
32. 2nd IF 460 KC
33. Tone Con.50,000
34. Vol.Con.250000
35. Spkr.Transformer
36.250 ohms Choke
37.RF Choke
38. Vib.Reed
39. 6.3V Pilot Lamps .3
40. Filament 6K8G, 6S7, 6G6
41. Filament 6U5
42.Vol.Cont.Switch
43. 6V
44. 33 ohms Choke
45. SW
46 MED
47 B.C.
48. Pickup
49. Vib.Trans.
50. Earth Termina



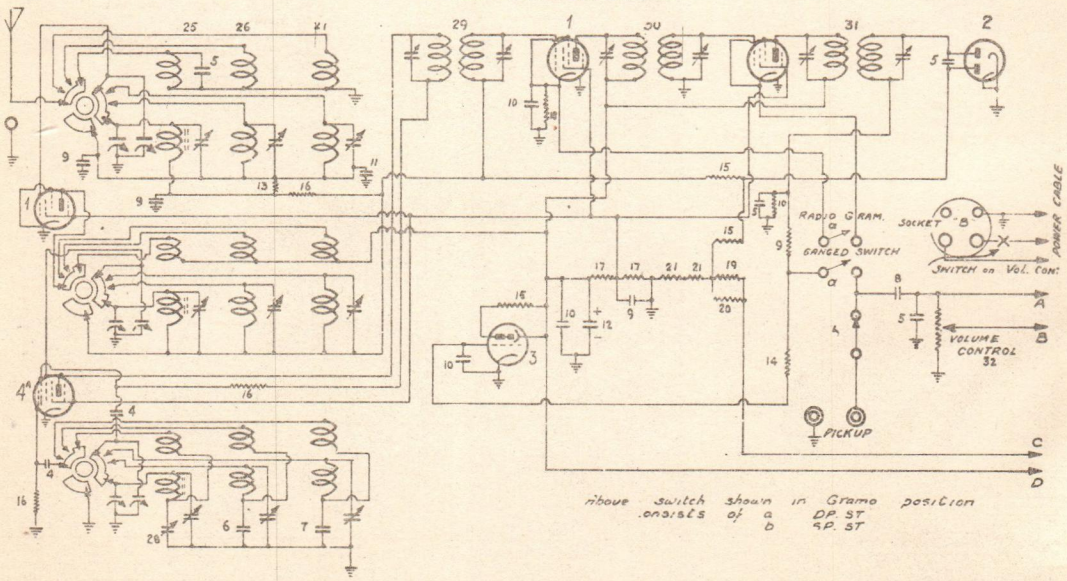
AMENDMENTS: 6G6G Cathode Resistor marked X 1[illegible] 1000 ohms

ULTIMATE 8-Valve P.P. AW-Vibrator



VALVES.
1. 6S7G
2. 6X8G
3. 1A45
4. 6U5 Magic Eye
5. 6G6G
6. 6T7
7. 1F6
CONDENSERS.
7. .00005
8. .0001
9. .0015
1. .004
11. .01
12. .02
13. .05
14. .1
15. .25
16. .5
17. 10mfd
18. 25mfd
19. 300mfd
RESISTORS.
20. 4 meg.
21. 1 meg
22. ½ meg.
23. 50,000
24. 25,000
25. 20,000
26. 15,000
27. 3,000
28. 600
29. 400
30. 300
31. ½ meg.
GENERAL.
32. ANT
33. Earth
34. TS5 padder
35. 1st IF 460 K.C.
36. 2nd IF 460 K.C.
37. Vol.Control
38. Spkr.Trans.
39. 250 ohms Choke
40. RF Choke
41. Vib. Reed
42. 6.3V .3 pilot lights
43. Filaments for 6D8G,6S7G,6G6G,6U5, and 6T7
44. Vol.Cont.Switch
45. 6 volts input
46. 33 ohms Choke
47. S.W.
48 Med.
49. B.C.
50. Pickup
51. Vib. Transformer
52. Earth Terminal
53. Fil. for 6U5

ULTIMATE 15-Valve De Luxe



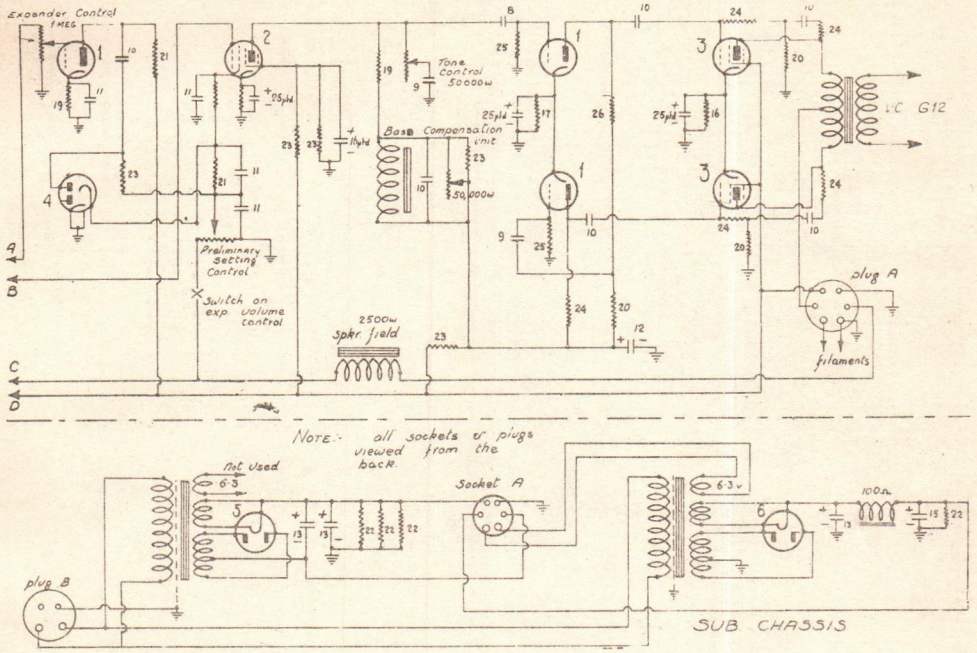
VALVES.
1. 6K7
2. 6H6
3. 6U5
4A. 6K8
CONDENSERS.
4. .00005
5. .0001
6. .0015
7. .004
8. .02
9. .05
10. .25
11. .5
12. 6mfd
RESISTORS
13. 2 meg
14. 2 M ohm
15. 1 M ohm
16. 50,000
17. 10,000
18. 2000
19. 325
0. 100
1. 2b
2. .25
GENERAL
3. Ant.
24. Gnd.
25.B.C.
26.MED.
27. S.W.
28. BC Padder TB5
29. 1st IF 460 KC
30. 2nd IF 460 KC
31. 3rd IF 460 KC
32. Vol. Control .25M ohm

ULTIMATE 15-Valve De Luxe

VALVES.
1. 6C5
2. 6L7
3. 6L6
4. 6H6
5. 80
6. 523

CONDENSERS.
7. .00025mfd
8. .02mfd
9. .05mfd
10. .1mfd
11. .5mfd
12. 8mfd
13. 12mfd
14. 16mfd
15. 25mfd

RESISTORS
16. 200 ohms
17. 2000 ohms
18. 3000 ohms
19. 5000 ohms
20. 10,000 ohms
21. 25,000 ohms
22. 30,000 ohms
23. 50,000 ohms
24. 100,000 ohms
25. 500,000 ohms
26. 1 meg



ULTIMATE 10-Valve P.P. A.W.

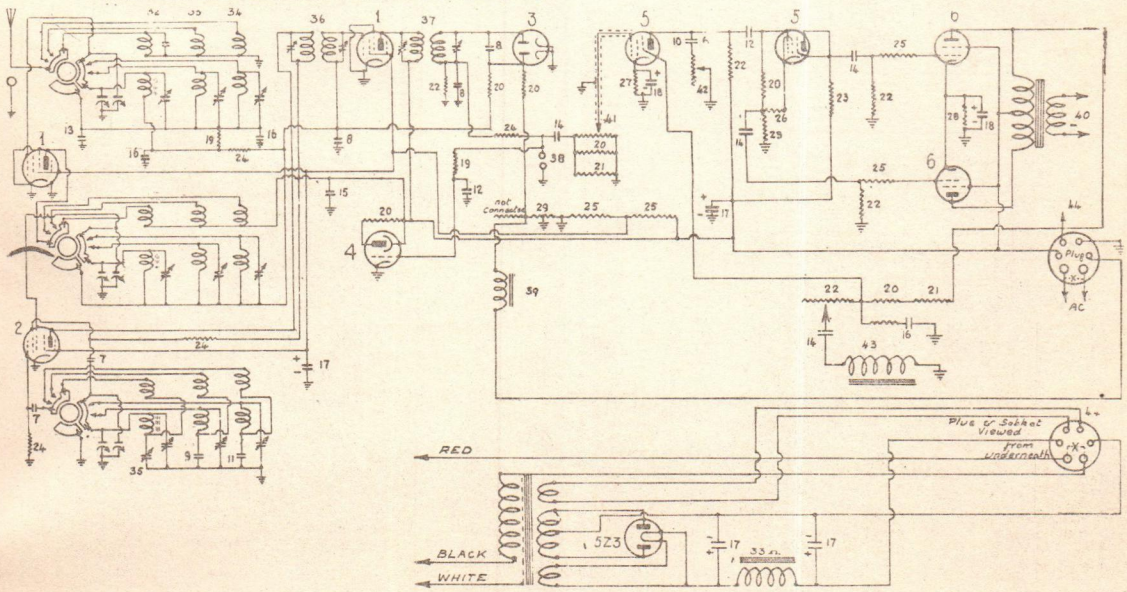
VALVES.
1. 6K7
2. 6K8
3. 6H6
4. 6U5
5. 6J7
6. 5V6G

CONDENSERS
7. .00005mfd
8. .0001mfd
9. .001mfd
10. .002mfd
11. .004mfd
12. .02mfd
13. .05mfd
14. .1mfd
15. .25mfd
16. .5mfd
17. 16mfd
18. 25mfd

RESISTORS.
19. 2 meg.
20. 1 meg
21. ½ meg.
22. ¼ meg.
23. 100,000 ohms
24. 50,000 ohms
25. 10,000 ohms
26. 5,000 ohms
27. 2,000 ohms
28. 200 ohms
29. 25-25 ohms

GENERAL
30. Ant
31. Gnd.
32. B.C.
33. Med.
34. S.W.
35. B.C. pad. TB5
36. 1st IF 460 K.C.
37. 2nd IF 460 K.C.
38. Pickup
39. Spkr. field 1500 ohms
40 Speaker
41. Vol.Control 1 meg.
42. Tone Control 250,000
43. Bass compens.
44. 6.3 filaments
X Switch on Vol Control

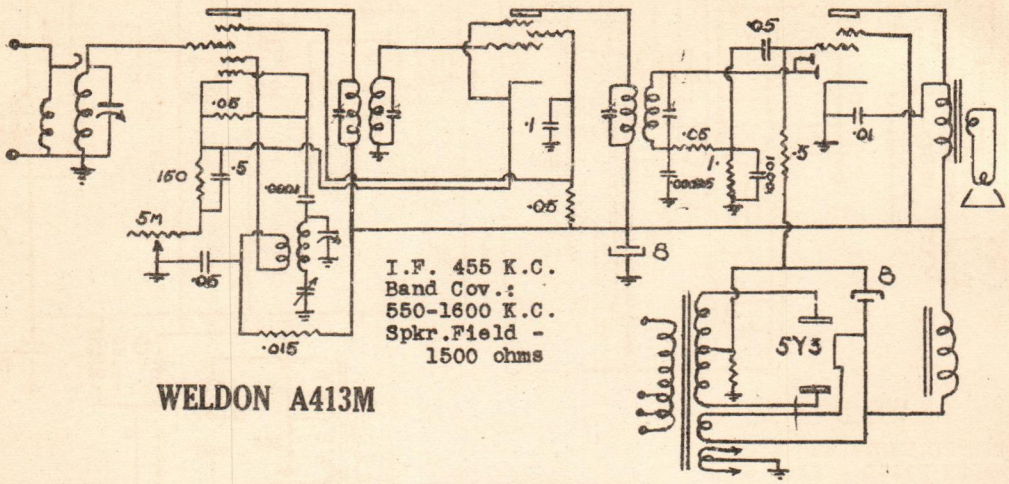
AMENDMENT. 41-20-21 (Vol.Control now a single ½ meg.



WELDON RADIO

Manu. Manufactured by Weldon Radio Finance Co., 4 Martin Place, Sydney, N.S.W.

6A8G 6U7G EBL1

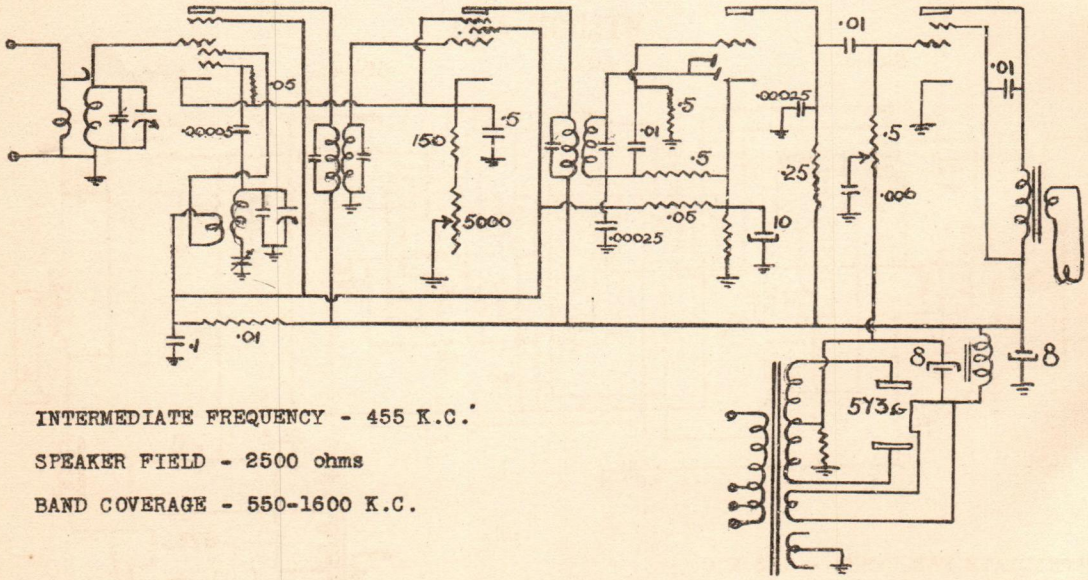


WELDON A413M

VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGE
6A8G	Freq.Converter	250	100	-3	120
6U7G	Inter.Amp.	250	100	-3	
EBL1	Detect.Output	250	250	-6	
5Y3G	Rectifier	385			

WELDON A513

6K8G 6U7G 6B6G 6F6G

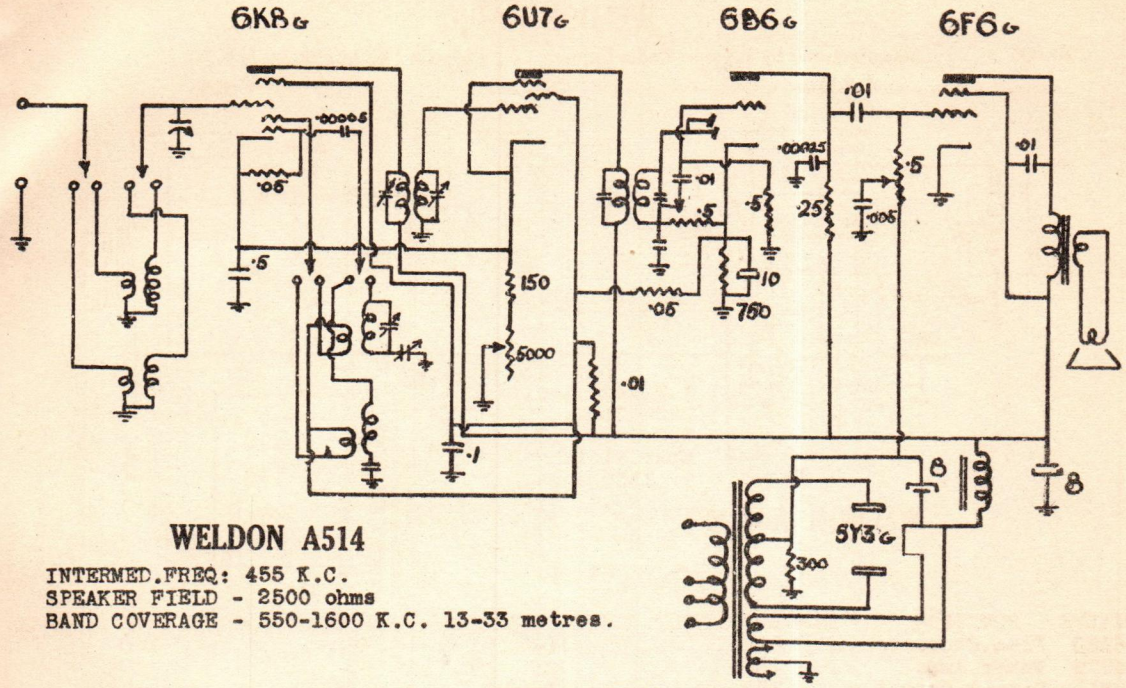


INTERMEDIATE FREQUENCY - 455 K.C.

SPEAKER FIELD - 2500 ohms

BAND COVERAGE - 550-1600 K.C.

VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGE
6K8G	Freq.Converter	250	100	-3	100
6U7G	Inter. Amp.	250	100	-3	
6B6G	Detect.Audio Amp.	60		-2	
6F6G	Output	250	250	-16	
5Y3G	Rectifier	385			

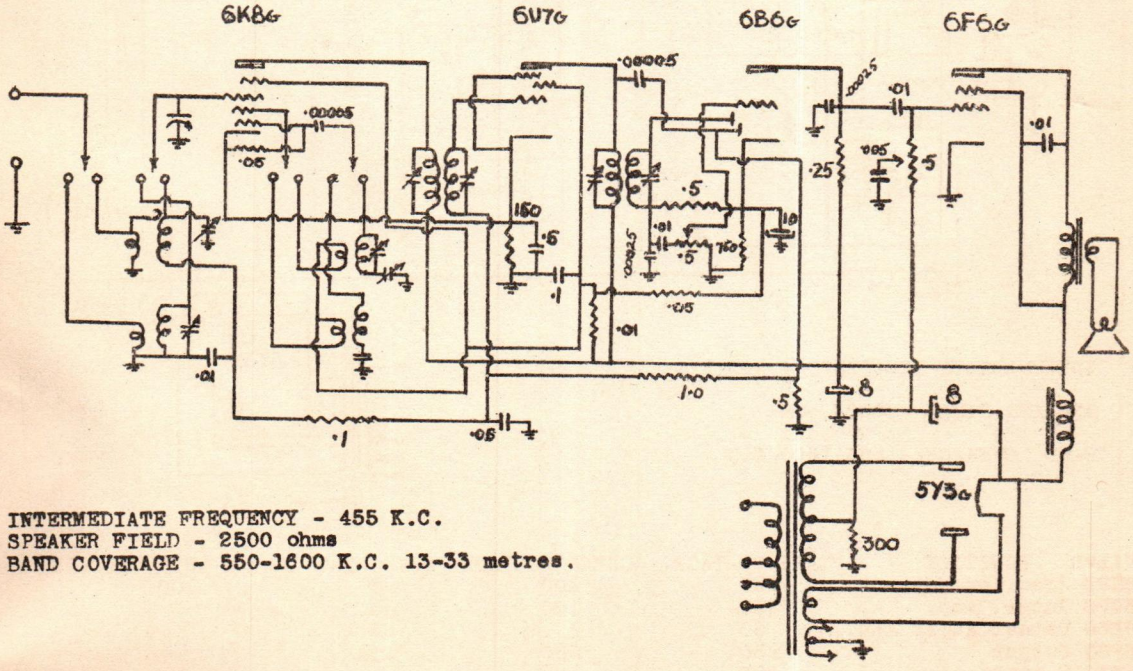


WELDON A514

INTERMED.FREQ: 455 K.C.
SPEAKER FIELD - 2500 ohms
BAND COVERAGE - 550-1600 K.C. 13-33 metres.

VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGE
6K8G	Freq.Converter	250	100	-3 (Vol.Cont. at Maximum)	100
6U7G	Inter.Amp.	250	100	-3	
6B6G	Det.Audio Amp.	60		-2	
6F6G	Output	250	250	-16	
5Y3G	Rectifier	385			

WELDON A524

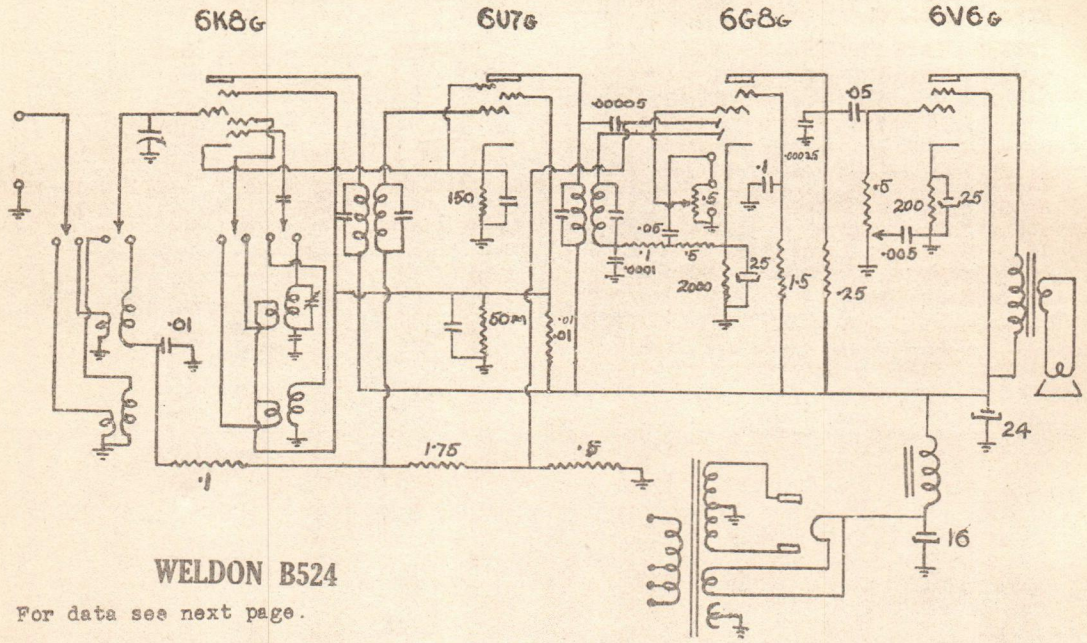


INTERMEDIATE FREQUENCY - 455 K.C.
SPEAKER FIELD - 2500 ohms
BAND COVERAGE - 550-1600 K.C. 13-33 metres.

WELDON A524 (Contd.)

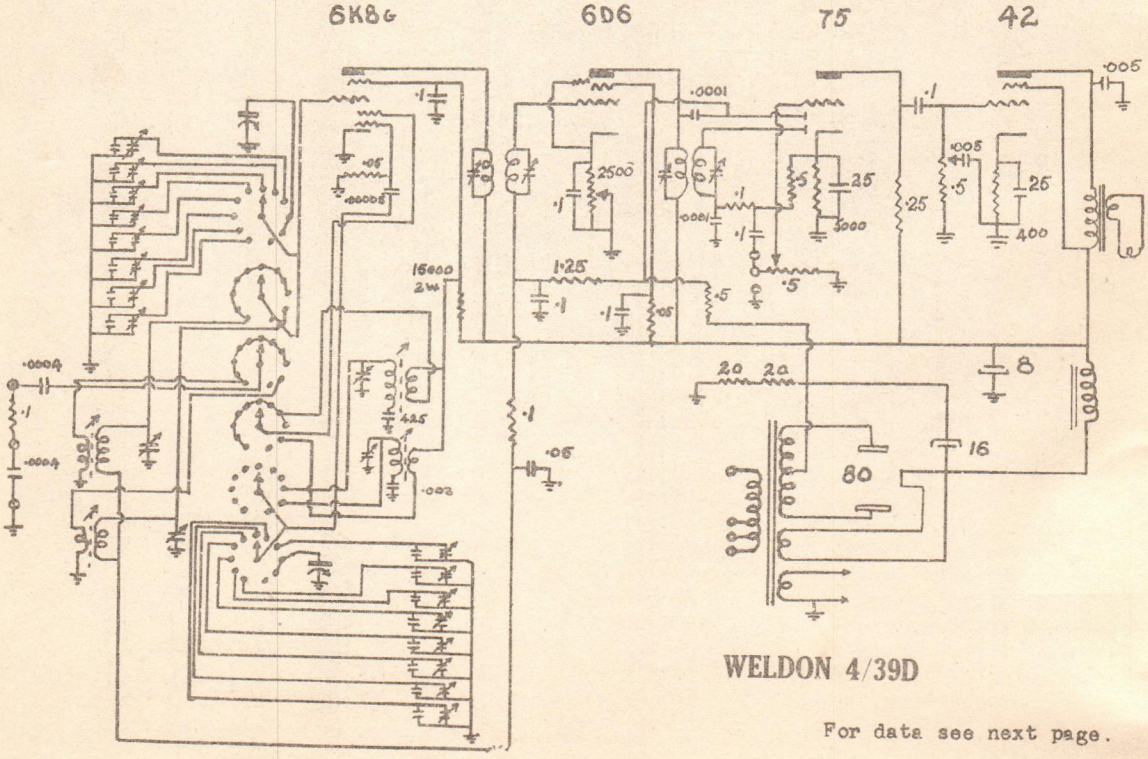
VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGE
6K8G	Freq.Converter	250	100	-3	100
6U7G	Inter.Amp.	250	100	-3	
6B6G	Det.Audio Amp.A.V.C.	60		-2	
6F6G	Output	250	250	-16	
5Y3G	Rectifier	385			

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WELDON B524

For data see next page.



WELDON 4/39D

For data see next page.

WELDON B524 (Contd.)

VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGES
6K8G	Freq.Converter	250	100	-3	100
6U7G	Inter. Amp.	250	100	-3	
6G8G	Det.AVC Audio Amp.	100	40	-2	
6V6G	Output	250	250	-12.5	
5Y3G	Rectifier	385			

INTERMEDIATE FREQUENCY - 455 K.C. SPEAKER FIELD - 2500 ohms

BAND COVERAGE - 550-1600 K.C. 13-33 metres.

WELDON 4/39D (Contd.)

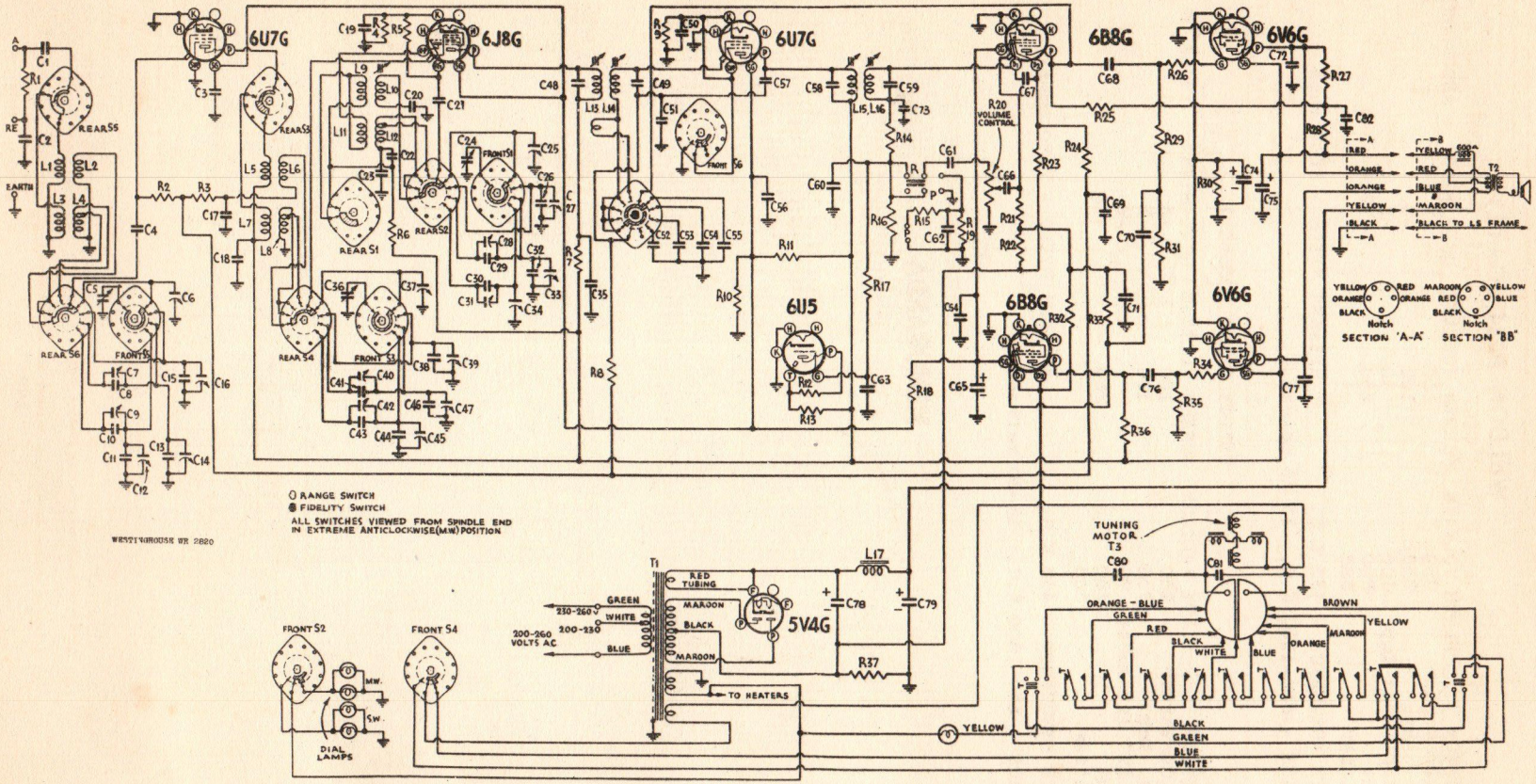
VALVE	FUNCTION	PLATE VOLTAGE	SCREEN VOLTAGE	GRID BIAS	ANODE GRID VOLTAGES
6K8G	Freq.Converter	250	100	-3	100
6D6	Inter. Amp.	250	100	-3	
75	Det. AVC 1st Audio	70		-2	
42	Output	250	250	-16	
80	Rectifier	385			

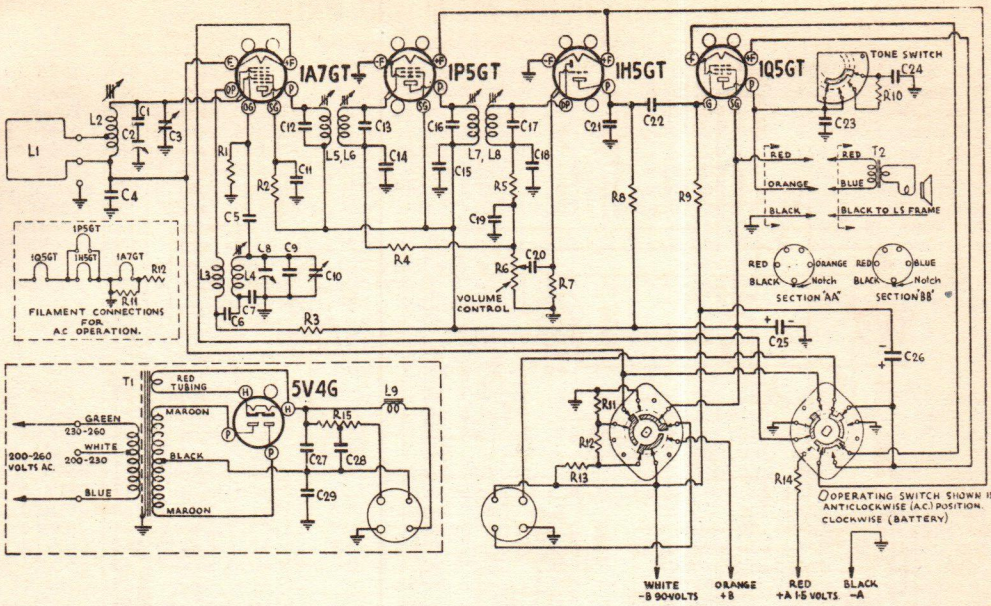
INTERMEDIATE FREQUENCY - 465 K.C. SPEAKER FIELD - 2500 ohms

BAND COVERAGE - 550-1600 K.C. 16-50 metres

.....

MEMORANDA


6U7G
6J8G
6U7G
6B8G
6V6G
6U5
6B8G
6V6G
5V4G
REAR S5
REAR S6
FRONT S6
REAR S1
REAR S2
FRONT S1
REAR S4
FRONT S3
FRONT S2
FRONT S4
R20 VOLUME CONTROL
RANGE SWITCH
FIDELITY SWITCH
ALL SWITCHES VIEWED FROM SPINDLE END IN EXTREME ANTICLOCKWISE(MIN) POSITION
WESTINGHOUSE WR 2820
T1
T2
T3
RED TUBING
MAROON
BLACK
MAROON
GREEN
WHITE
BLUE
230-260 V
200-230
200-260 VOLTS AC
TO HEATERS
TUNING MOTOR
ORANGE - BLUE
GREEN
RED
BLACK
WHITE
BLUE
ORANGE
MAROON
YELLOW
BROWN
YELLOW
BLACK
GREEN
BLUE
WHITE
DIAL LAMPS
MW.
SW.
YELLOW
ORANGE
RED
BLUE
MAROON
BLACK TO LS FRAME
Notch
SECTION 'A-A'
SECTION 'BB'



WESTINGHOUSE W.R. 650

4 Valve, One Band A.C. or Battery Operated Portable

R1.	500,000 ohms 1/2W	C1.	4mmfd mica
R2.	500,000 ohms 1/2W	C2.	6-14mmfd air
R3.	500,000 ohms 1/2W	C3.	Tuning Cond.
R4.	20,000 ohms 1W	C4.	.05mfd paper
R5.	2,000 ohms 1W	C5.	Trimmer
R6.	500,000 ohms Vol. Control	C6.	.05mfd paper
R7.	250,000 ohms 1/2W	C7.	16-24mmfd air (Padder)
R8.	500,000 ohms 1/2W	C8.	Tuning Cond.
R9.	500,000 " " 1/2W	C9.	.1mfd paper
R10.	500,000 ohms 1/2W	C10.	.05mfd paper
R11.	500,000 " " 1/2W	C11.	.05mfd paper
R12.	500,000 ohms 1W	C12.	.05mfd paper
R13.	2·5 ohms W.W.	C13.	.05mfd paper
R14.	1·7 ohms 1/2W	C14.	.05mfd paper

R1.	500,000 ohms 1/2W	C1.	4mmfd mica
R2.	500,000 ohms 1/2W	C2.	6-14mmfd air
R3.	500,000 ohms 1/2W	C3.	Tuning Cond.
R4.	20,000 ohms 1W	C4.	.05mfd paper
R5.	2,000 ohms 1W	C5.	Trimmer
R6.	500,000 ohms Vol. Control	C6.	.05mfd paper
R7.	250,000 ohms 1/2W	C7.	16-24mmfd air (Padder)
R8.	500,000 ohms 1/2W	C8.	Tuning Cond.
R9.	500,000 " " 1/2W	C9.	.1mfd paper
R10.	500,000 ohms 1/2W	C10.	.05mfd paper
R11.	500,000 " " 1/2W	C11.	.05mfd paper
R12.	500,000 ohms 1W	C12.	.05mfd paper
R13.	2·5 ohms W.W.	C13.	.05mfd paper
R14.	1·7 ohms 1/2W	C14.	.05mfd paper

WESTINGHOUSE W.R. 650

4 Valve, One Band A.C. or Battery Operated Portable

R1.	500,000 ohms 1/2W	C1.	4mmfd mica
R2.	500,000 ohms 1/2W	C2.	6-14mmfd air
R3.	500,000 ohms 1/2W	C3.	Tuning Cond.
R4.	20,000 ohms 1W	C4.	.05mfd paper
R5.	2,000 ohms 1W	C5.	Trimmer
R6.	500,000 ohms Vol. Control	C6.	.05mfd paper
R7.	250,000 ohms 1/2W	C7.	16-24mmfd air (Padder)
R8.	500,000 ohms 1/2W	C8.	Tuning Cond.
R9.	500,000 " " 1/2W	C9.	.1mfd paper
R10.	500,000 ohms 1/2W	C10.	.05mfd paper
R11.	500,000 " " 1/2W	C11.	.05mfd paper
R12.	500,000 ohms 1W	C12.	.05mfd paper
R13.	2·5 ohms W.W.	C13.	.05mfd paper
R14.	1·7 ohms 1/2W	C14.	.05mfd paper

WESTINGHOUSE W.R. 880

8 Valve, 4 Band A.C. Operated

R1.	100,000ohms 1/2W	C1.	.05mfd paper
R2.	500,000 " "	C2.	.05mfd paper
R3.	500,000 " "	C3.	.05mfd paper
R4.	400 ohms 1/2W	C4.	.05mfd paper
R5.	20,000 ohms 1W	C5.	.05mfd paper
R6.	20,000 ohms 1/2W	C6.	.05mfd paper
R7.	300 ohms 1/2W	C7.	.05mfd paper
R8.	800 ohms 1W	C8.	.05mfd paper
R9.	11,000 ohms 1W	C9.	.05mfd paper
R10.	10,000 ohms 1W	C10.	.05mfd paper
R11.	800,000 " "	C11.	.05mfd paper
R12.	800,000 " "	C12.	.05mfd paper
R13.	80,000 ohms 1W	C13.	.05mfd paper
R14.	80,000 ohms 1/2W	C14.	.05mfd paper
R15.	800,000 " "	C15.	.05mfd paper
R16.	800,000 " "	C16.	.05mfd paper
R17.	1·4meg ohms 1W	C17.	.05mfd paper
R18.	50,000 ohms 1/2W	C18.	.05mfd paper
R19.	50,000 ohms 1/2W	C19.	.05mfd paper
R20.	1·4meg ohms 1W	C20.	.05mfd paper
R21.	800,000 " "	C21.	.05mfd paper
R22.	800,000 " "	C22.	.05mfd paper
R23.	1 meg. Vol. Cont.	C23.	.05mfd paper
R24.	1·4meg ohms 1/2W	C24.	.05mfd paper
R25.	800,000 ohms 1/2W	C25.	.05mfd paper
R26.	800,000 ohms 1/2W	C26.	.05mfd paper
R27.	1·4meg ohms 1W	C27.	.05mfd paper
R28.	800,000 ohms 1W	C28.	.05mfd paper
R29.	80,000 ohms 1W	C29.	.05mfd paper
R30.	80,000 ohms 1/2W	C30.	.05mfd paper
R31.	7600 ohms 1W	C31.	.05mfd paper
R32.	100,000 ohms 1/2W	C32.	.05mfd paper
R33.	7600 ohms 1W	C33.	.05mfd paper
R34.	50,000 ohms "	C34.	.05mfd paper
R35.	50,000 ohms "	C35.	.05mfd paper
R36.	380,000 ohms 1W	C36.	.05mfd paper
R37.	38 ohms 1W	C37.	.05mfd paper
R38.	380,000 ohms 1W	C38.	.05mfd paper
R39.	380,000 ohms 1/2W	C39.	.05mfd paper
R40.	380,000 ohms 1/2W	C40.	.05mfd paper
R41.	380,000 ohms 1/2W	C41.	.05mfd paper
R42.	380,000 ohms 1/2W	C42.	.05mfd paper
R43.	380,000 ohms 1/2W	C43.	.05mfd paper
R44.	380,000 ohms 1/2W	C44.	.05mfd paper
R45.	380,000 ohms 1/2W	C45.	.05mfd paper
R46.	380,000 ohms 1/2W	C46.	.05mfd paper
R47.	380,000 ohms 1/2W	C47.	.05mfd paper
R48.	380,000 ohms 1/2W	C48.	.05mfd paper
R49.	380,000 ohms 1/2W	C49.	.05mfd paper
R50.	380,000 ohms 1/2W	C50.	.05mfd paper
R51.	380,000 ohms 1/2W	C51.	.05mfd paper
R52.	380,000 ohms 1/2W	C52.	.05mfd paper
R53.	380,000 ohms 1/2W	C53.	.05mfd paper
R54.	380,000 ohms 1/2W	C54.	.05mfd paper
R55.	380,000 ohms 1/2W	C55.	.05mfd paper
R56.	380,000 ohms 1/2W	C56.	.05mfd paper
R57.	380,000 ohms 1/2W	C57.	.05mfd paper
R58.	380,000 ohms 1/2W	C58.	.05mfd paper
R59.	380,000 ohms 1/2W	C59.	.05mfd paper
R60.	380,000 ohms 1/2W	C60.	.05mfd paper
R61.	380,000 ohms 1/2W	C61.	.05mfd paper
R62.	380,000 ohms 1/2W	C62.	.05mfd paper
R63.	380,000 ohms 1/2W	C63.	.05mfd paper
R64.	380,000 ohms 1/2W	C64.	.05mfd paper
R65.	380,000 ohms 1/2W	C65.	.05mfd paper
R66.	380,000 ohms 1/2W	C66.	.05mfd paper
R67.	380,000 ohms 1/2W	C67.	.05mfd paper
R68.	380,000 ohms 1/2W	C68.	.05mfd paper
R69.	380,000 ohms 1/2W	C69.	.05mfd paper
R70.	380,000 ohms 1/2W	C70.	.05mfd paper
R71.	380,000 ohms 1/2W	C71.	.05mfd paper
R72.	380,000 ohms 1/2W	C72.	.05mfd paper
R73.	380,000 ohms 1/2W	C73.	.05mfd paper
R74.	380,000 ohms 1/2W	C74.	.05mfd paper
R75.	380,000 ohms 1/2W	C75.	.05mfd paper
R76.	380,000 ohms 1/2W	C76.	.05mfd paper
R77.	380,000 ohms 1/2W	C77.	.05mfd paper
R78.	380,000 ohms 1/2W	C78.	.05mfd paper
R79.	380,000 ohms 1/2W	C79.	.05mfd paper
R80.	380,000 ohms 1/2W	C80.	.05mfd paper
R81.	380,000 ohms 1/2W	C81.	.05mfd paper
R82.	380,000 ohms 1/2W	C82.	.05mfd paper
R83.	380,000 ohms 1/2W	C83.	.05mfd paper
R84.	380,000 ohms 1/2W	C84.	.05mfd paper
R85.	380,000 ohms 1/2W	C85.	.05mfd paper
R86.	380,000 ohms 1/2W	C86.	.05mfd paper
R87.	380,000 ohms 1/2W	C87.	.05mfd paper
R88.	380,000 ohms 1/2W	C88.	.05mfd paper
R89.	380,000 ohms 1/2W	C89.	.05mfd paper
R90.	380,000 ohms 1/2W	C90.	.05mfd paper
R91.	380,000 ohms 1/2W	C91.	.05mfd paper
R92.	380,000 ohms 1/2W	C92.	.05mfd paper
R93.	380,000 ohms 1/2W	C93.	.05mfd paper
R94.	380,000 ohms 1/2W	C94.	.05mfd paper
R95.	380,000 ohms 1/2W	C95.	.05mfd paper
R96.	380,000 ohms 1/2W	C96.	.05mfd paper
R97.	380,000 ohms 1/2W	C97.	.05mfd paper
R98.	380,000 ohms 1/2W	C98.	.05mfd paper
R99.	380,000 ohms 1/2W	C99.	.05mfd paper
R100.	380,000 ohms 1/2W	C100.	.05mfd paper
R101.	380,000 ohms 1/2W	C101.	.05mfd paper
R102.	380,000 ohms 1/2W	C102.	.05mfd paper
R103.	380,000 ohms 1/2W	C103.	.05mfd paper
R104.	380,000 ohms 1/2W	C104.	.05mfd paper
R105.	380,000 ohms 1/2W	C105.	.05mfd paper
R106.	380,000 ohms 1/2W	C106.	.05mfd paper
R107.	380,000 ohms 1/2W	C107.	.05mfd paper
R108.	380,000 ohms 1/2W	C108.	.05mfd paper
R109.	380,000 ohms 1/2W	C109.	.05mfd paper
R110.	380,000 ohms 1/2W	C110.	.05mfd paper
R111.	380,000 ohms 1/2W	C111.	.05mfd paper
R112.	380,000 ohms 1/2W	C112.	.05mfd paper
R113.	380,000 ohms 1/2W	C113.	.05mfd paper
R114.	380,000 ohms 1/2W	C114.	.05mfd paper
R115.	380,000 ohms 1/2W	C115.	.05mfd paper
R116.	380,000 ohms 1/2W	C116.	.05mfd paper
R117.	380,000 ohms 1/2W	C117.	.05mfd paper
R118.	380,000 ohms 1/2W	C118.	.05mfd paper
R119.	380,000 ohms 1/2W	C119.	.05mfd paper
R120.	380,000 ohms 1/2W	C120.	.05mfd paper
R121.	380,000 ohms 1/2W	C121.	.05mfd paper
R122.	380,000 ohms 1/2W	C122.	.05mfd paper
R123.	380,000 ohms 1/2W	C123.	.05mfd paper
R124.	380,000 ohms 1/2W	C124.	.05mfd paper
R125.	380,000 ohms 1/2W	C125.	.05mfd paper
R126.	380,000 ohms 1/2W	C126.	.05mfd paper
R127.	380,000 ohms 1/2W	C127.	.05mfd paper
R128.	380,000 ohms 1/2W	C128.	.05mfd paper
R129.	380,000 ohms 1/2W	C129.	.05mfd paper
R130.	380,000 ohms 1/2W	C130.	.05mfd paper
R131.	380,000 ohms 1/2W	C131.	.05mfd paper
R132.	380,000 ohms 1/2W	C132.	.05mfd paper
R133.	380,000 ohms 1/2W	C133.	.05mfd paper
R134.	380,000 ohms 1/2W	C134.	.05mfd paper
R135.	380,000 ohms 1/2W	C135.	.05mfd paper
R136.	380,000 ohms 1/2W	C136.	.05mfd paper
R137.	380,000 ohms 1/2W	C137.	.05mfd paper
R138.	380,000 ohms 1/2W	C138.	.05mfd paper
R139.	380,000 ohms 1/2W	C139.	.05mfd paper
R140.	380,000 ohms 1/2W	C140.	.05mfd paper
R141.	380,000 ohms 1/2W	C141.	.05mfd paper
R142.	380,000 ohms 1/2W	C142.	.05mfd paper
R143.	380,000 ohms 1/2W	C143.	.05mfd paper
R144.	380,000 ohms 1/2W	C144.	.05mfd paper
R145.	380,000 ohms 1/2W	C145.	.05mfd paper
R146.	380,000 ohms 1/2W	C146.	.05mfd paper
R147.	380,000 ohms 1/2W	C147.	.05mfd paper
R148.	380,000 ohms 1/2W	C148.	.05mfd paper
R149.	380,000 ohms 1/2W	C149.	.05mfd paper
R150.	380,000 ohms 1/2W	C150.	.05mfd paper
R151.	380,000 ohms 1/2W	C151.	.05mfd paper
R152.	380,000 ohms 1/2W	C152.	.05mfd paper
R153.	380,000 ohms 1/2W	C153.	.05mfd paper
R154.	380,000 ohms 1/2W	C154.	.05mfd paper
R155.	380,000 ohms 1/2W	C155.	.05mfd paper
R156.	380,000 ohms 1/2W	C156.	.05mfd paper
R157.	380,000 ohms 1/2W	C157.	.05mfd paper
R158.	380,000 ohms 1/2W	C158.	.05mfd paper
R159.	380,000 ohms 1/2W	C159.	.05mfd paper
R160.	380,000 ohms 1/2W	C160.	.05mfd paper
R161.	380,000 ohms 1/2W	C161.	.05mfd paper
R162.	380,000 ohms 1/2W	C162.	.05mfd paper
R163.	380,000 ohms 1/2W	C163.	.05mfd paper
R164.	380,000 ohms 1/2W	C164.	.05mfd paper
R165.	380,000 ohms 1/2W	C165.	.05mfd paper
R166.	380,000 ohms 1/2W	C166.	.05mfd paper
R167.	380,000 ohms 1/2W	C167.	.05mfd paper
R168.	380,000 ohms 1/2W	C168.	.05mfd paper
R169.	380,000 ohms 1/2W	C169.	.05mfd paper
R170.	380,000 ohms 1/2W	C170.	.05mfd paper
R171.	380,000 ohms 1/2W	C171.	.05mfd paper
R172.	380,000 ohms 1/2W	C172.	.05mfd paper
R173.	380,000 ohms 1/2W	C173.	.05mfd paper
R174.	380,000 ohms 1/2W	C174.	.05mfd paper
R175.	380,000 ohms 1/2W	C175.	.05mfd paper
R176.	380,000 ohms 1/2W	C176.	.05mfd paper
R177.	380,000 ohms 1/2W	C177.	.05mfd paper
R178.	380,000 ohms 1/2W	C178.	.05mfd paper
R179.	380,000 ohms 1/2W	C179.	.05mfd paper
R180.	380,000 ohms 1/2W	C180.	.05mfd paper
R181.	380,000 ohms 1/2W	C181.	.05mfd paper
R182.	380,000 ohms 1/2W	C182.	.05mfd paper
R183.	380,000 ohms 1/2W	C183.	.05mfd paper
R184.	380,000 ohms 1/2W	C184.	.05mfd paper
R185.	380,000 ohms 1/2W	C185.	.05mfd paper
R186.	380,000 ohms 1/2W	C186.	.05mfd paper
R187.	380,000 ohms 1/2W	C187.	.05mfd paper
R188.	380,000 ohms 1/2W	C188.	.05mfd paper
R189.	380,000 ohms 1/2W	C189.	.05mfd paper
R190.	380,000 ohms 1/2W	C190.	.05mfd paper
R191.	380,000 ohms 1/2W	C191.	.05mfd paper
R192.	380,000 ohms 1/2W	C192.	.05mfd paper
R193.	380,000 ohms 1/2W	C193.	.05mfd paper
R194.	380,000 ohms 1/2W	C194.	.05mfd paper
R195.	380,000 ohms 1/2W	C195.	.05mfd paper
R196.	380,000 ohms 1/2W	C196.	.05mfd paper
R197.	380,000 ohms 1/2W	C197.	.05mfd paper
R198.	380,000 ohms 1/2W	C198.	.05mfd paper
R199.	380,000 ohms 1/2W	C199.	.05mfd paper
R200.	380,000 ohms 1/2W	C200.	.05mfd paper
R201.	380,000 ohms 1/2W	C201.	.05mfd paper
R202.	380,000 ohms 1/2W	C202.	.05mfd paper
R203.	380,000 ohms 1/2W	C203.	.05mfd paper
R204.	380,000 ohms 1/2W	C204.	.05mfd paper
R205.	380,000 ohms 1/2W	C205.	.05mfd paper
R206.	380,000 ohms 1/2W	C206.	.05mfd paper
R207.	380,000 ohms 1/2W	C207.	.05mfd paper
R208.	380,000 ohms 1/2W	C208.	.05mfd paper
R209.	380,000 ohms 1/2W	C209.	.05mfd paper
R210.	380,000 ohms 1/2W	C210.	.05mfd paper
R211.	380,000 ohms 1/2W	C211.	.05mfd paper
R212.	380,000 ohms 1/2W	C212.	.05mfd paper
R213.	380,000 ohms 1/2W	C213.	.05mfd paper
R214.	380,000 ohms 1/2W	C214.	.05mfd paper
R215.	380,000 ohms 1/2W	C215.	.05mfd paper
R216.	380,000 ohms 1/2W	C216.	.05mfd paper
R217.	380,000 ohms 1/2W	C217.	.05mfd paper
R218.	380,000 ohms 1/2W	C218.	.05mfd paper
R219.	380,000 ohms 1/2W	C219.	.05mfd paper
R220.	380,000 ohms 1/2W	C220.	.05mfd paper
R221.	380,000 ohms 1/2W	C221.	.05mfd paper
R222.	380,000 ohms 1/2W	C222.	.05mfd paper
R223.	380,000 ohms 1/2W	C223.	.05mfd paper
R224.	380,000 ohms 1/2W	C224.	.05mfd paper
R225.	380,000 ohms 1/2W	C225.	.05mfd paper
R226.	380,000 ohms 1/2W	C226.	.05mfd paper
R227.	380,000 ohms 1/2W	C227.	.05mfd paper
R228.	380,000 ohms 1/2W	C228.	.05mfd paper
R229.	380,000 ohms 1/2W	C229.	.05mfd paper
R230.	380,000 ohms 1/2W	C230.	.05mfd paper
R231.	380,000 ohms 1/2W	C231.	.05mfd paper
R232.	380,000 ohms 1/2W	C232.	.05mfd paper
R233.	380,000 ohms 1/2W	C233.	.05mfd paper
R234.	380,000 ohms 1/2W	C234.	.05mfd paper
R235.	380,000 ohms 1/2W	C235.	.05mfd paper
R236.	380,000 ohms 1/2W	C236.	.05mfd paper
R237.	380,000 ohms 1/2W	C237.	.05mfd paper
R238.	380,000 ohms 1/2W	C238.	.05mfd paper
R239.	380,000 ohms 1/2W	C239.	.05mfd paper
R240.	380,000 ohms 1/2W	C240.	.05mfd paper
R241.	380,000 ohms 1/2W	C241.	.05mfd paper
R242.	380,000 ohms 1/2W	C242.	.05mfd paper
R243.	380,000 ohms 1/2W	C243.	.05mfd paper
R244.	380,000 ohms 1/2W	C244.	.05mfd paper
R245.	380,000 ohms 1/2W	C245.	.05mfd paper
R246.	380,000 ohms 1/2W	C246.	.05mfd paper
R247.	380,000 ohms 1/2W	C247.	.05mfd paper
R248.	380,000 ohms 1/2W	C248.	.05mfd paper
R249.	380,000 ohms 1/2W	C249.	.05mfd paper
R250.	380,000 ohms 1/2W	C250.	.05mfd paper
R251.	380,000 ohms 1/2W	C251.	.05mfd paper
R252.	380,000 ohms 1/2W	C252.	.05mfd paper
R253.	380,000 ohms 1/2W	C253.	.05mfd paper
R254.	380,000 ohms 1/2W	C254.	.05mfd paper
R255.	380,000 ohms 1/2W	C255.	.05mfd paper
R256.	380,000 ohms 1/2W	C256.	.05mfd paper
R257.	380,000 ohms 1/2W	C257.	.05mfd paper
R258.	380,000 ohms 1/2W	C258.	.05mfd paper
R259.	380,000 ohms 1/2W	C259.	.05mfd paper
R260.	380,000 ohms 1/2W	C260.	.05mfd paper
R261.	380,000 ohms 1/2W	C261.	.05mfd paper
R262.	380,000 ohms 1/2W	C262.	.05mfd paper
R263.	380,000 ohms 1/2W	C263.	.05mfd paper
R264.	380,000 ohms 1/2W	C264.	.05mfd paper
R265.	380,000 ohms 1/2W	C265.	.05mfd paper
R266.	380,000 ohms 1/2W	C266.	.05mfd paper
R267.	380,000 ohms 1/2W	C267.	.05mfd paper
R268.	380,000 ohms 1/2W	C268.	.05mfd paper
R269.	380,000 ohms 1/2W	C269.	.05mfd paper
R270.	380,000 ohms 1/2W	C270.	.05mfd paper
R271.	380,000 ohms 1/2W	C271.	.05mfd paper
R272.	380,000 ohms 1/2W	C272.	.05mfd paper
R273.	380,000 ohms 1/2W	C273.	.05mfd paper
R274.	380,000 ohms 1/2W	C274.	.05mfd paper
R275.	380,000 ohms 1/2W	C275.	.05mfd paper
R276.	380,000 ohms 1/2W	C276.	.05mfd paper
R277.	380,000 ohms 1/2W	C277.	.05mfd paper
R278.	380,000 ohms 1/2W	C278.	.05mfd paper
R279.	380,000 ohms 1/2W	C279.	.05mfd paper
R280.	380,000 ohms 1/2W	C280.	.05mfd paper
R281.	380,000 ohms 1/2W	C281.	.05mfd paper
R282.	380,000 ohms 1/2W	C282.	.05mfd paper
R283.	380,000 ohms 1/2W	C283.	.05mfd paper
R284.	380,000 ohms 1/2W	C284.	.05mfd paper
R285.	380,000 ohms 1/2W	C285.	.05mfd paper
R286.	380,000 ohms 1/2W	C286.	.05mfd paper
R287.	380,000 ohms 1/2W	C287.	.05mfd paper
R288.	380,000 ohms 1/2W	C288.	.05mfd paper
R289.	380,000 ohms 1/2W	C289.	.05mfd paper
R290.	380,000 ohms 1/2W	C290.	.05mfd paper
R291.	380,000 ohms 1/2W	C291.	.05mfd paper
R292.	380,000 ohms 1/2W	C292.	.05mfd paper
R293.	380,000 ohms 1/2W	C293.	.05mfd paper
R294.	380,000 ohms 1/2W	C294.	.05mfd paper
R295.	380,000 ohms 1/2W	C295.	.05mfd paper
R296.	380,000 ohms 1/2W	C296.	.05mfd paper
R297.	380,000 ohms 1/2W	C297.	.05mfd paper
R298.	380,000 ohms 1/2W	C298.	.05mfd paper
R299.	380,000 ohms 1/2W	C299.	.05mfd paper
R300.	380,000 ohms 1/2W	C300.	.05mfd paper
R301.	380,000 ohms 1/2W	C301.	.05mfd paper
R302.	380,000 ohms 1/2W	C302.	.05mfd paper
R303.	380,000 ohms 1/2W	C303.	.05mfd paper
R304.	380,000 ohms 1/2W	C304.	.05mfd paper
R305.	380,000 ohms 1/2W	C305.	.05mfd paper
R306.	380,000 ohms 1/2W	C306.	.05mfd paper
R307.	380,000 ohms 1/2W	C307.	.05mfd paper
R308.	380,000 ohms 1/2W	C308.	.05mfd paper
R309.	380,000 ohms 1/2W	C309.	.05mfd paper
R310.	380,000 ohms 1/2W	C310.	.05mfd paper
R311.	380,000 ohms 1/2W	C311.	.05mfd paper
R312.	380,000 ohms 1/2W	C312.	.05mfd paper
R313.	380,000 ohms 1/2W	C313.	.05mfd paper
R314.	380,000 ohms 1/2W	C314.	.05mfd paper
R315.	380,000 ohms 1/2W	C315.	.05mfd paper
R316.	380,000 ohms 1/2W	C316.	.05mfd paper
R317.	380,000 ohms 1/2W	C317.	.05mfd paper
R318.	380,000 ohms 1/2W	C318.	.05mfd paper
R319.	380,000 ohms 1/2W	C319.	.05mfd paper
R320.	380,000 ohms 1/2W	C320.	.05mfd paper
R321.	380,000 ohms 1/2W	C321.	.05mfd paper
R322.	380,000 ohms 1/2W	C322.	.05mfd paper
R323.	380,000 ohms 1/2W	C323.	.05mfd paper
R324.	380,000 ohms 1/2W	C324.	.05mfd paper
R325.	380,000 ohms 1/2W	C325.	.05mfd paper
R326.	380,000 ohms 1/2W	C326.	.05mfd paper
R327.	380,000 ohms 1/2W	C327.	.05mfd paper
R328.	380,000 ohms 1/2W	C328.	.05mfd paper
R329.	380,000 ohms 1/2W	C329.	.05mfd paper
R330.	380,000 ohms 1/2W	C330.	.05mfd paper
R331.	380,000 ohms 1/2W	C331.	.05mfd paper
R332.	380,000 ohms 1/2W	C332.	.05mfd paper
R333.	380,000 ohms 1/2W	C333.	.05mfd paper
R334.	380,000 ohms 1/2W	C334.	.05mfd paper
R335.	380,000 ohms 1/2W	C335.	.05mfd paper
R336.	380,000 ohms 1/2W	C336.	.05mfd paper
R337.	380,000 ohms 1/2W	C337.	.05mfd paper
R338.	380,000 ohms 1/2W	C338.	.05mfd paper
R339.	380,000 ohms 1/2W	C339.	.05mfd paper
R340.	380,000 ohms 1/2W	C340.	.05mfd paper
R341.	380,000 ohms 1/2W	C341.	.05mfd paper
R342.	380,000 ohms 1/2W	C342.	.05mfd paper
R343.	380,000 ohms 1/2W	C343.	.05mfd paper
R344.	380,000 ohms 1/2W	C344.	.05mfd paper
R345.	380,000 ohms 1/2W	C345.	.05mfd paper
R346.	380,000 ohms 1/2W	C346.	.05mfd paper
R347.	380,000 ohms 1/2W	C347.	.05mfd paper
R348.	380,000 ohms 1/2W	C348.	.05mfd paper
R349.	380,000 ohms 1/2W	C349.	.05mfd paper
R350.	380,000 ohms 1/2W	C350.	.05mfd paper
R351.	380,000 ohms 1/2W	C351.	.05mfd paper
R352.	380,000 ohms 1/2W	C352.	.05mfd paper
R353.	380,000 ohms 1/2W	C353.	.05mfd paper
R354.	380,000 ohms 1/2W	C354.	.05mfd paper
R355.	380,000 ohms 1/2W	C355.	.05mfd paper
R356.	380,000 ohms 1/2W	C356.	.05mfd paper
R357.	380,000 ohms 1/2W	C357.	.05mfd paper
R358.	380,000 ohms 1/2W	C358.	.05mfd paper
R359.	380,000 ohms 1/2W	C359.	.05mfd paper
R360.	380,000 ohms 1/2W	C360.	.05mfd paper
R361.	380,000 ohms 1/2W	C361.	.05mfd paper
R362.	380,000 ohms 1/2W	C362.	.05mfd paper
R363.	380,000 ohms 1/2W	C363.	.05mfd paper
R364.	380,000 ohms 1/2W	C364.	.05mfd paper
R365.	380,000 ohms 1/2W	C365.	.05mfd paper
R366.	380,000 ohms 1/2W	C366.	.05mfd paper
R367.	380,000 ohms 1/2W	C367.	.05mfd paper
R368.	380,000 ohms 1/2W	C368.	.05mfd paper
R369.	380,000 ohms 1/2W	C369.	.05mfd paper
R370.	380,000 ohms 1/2W	C370.	.05mfd paper
R371.	380,000 ohms 1/2W	C371.	.05mfd paper
R372.	380,000 ohms 1/2W	C372.	.05mfd paper
R373.	380,000 ohms 1/2W	C373.	.05mfd paper
R374.	380,000 ohms 1/2W	C374.	.05mfd paper
R375.	380,000 ohms 1/2W	C375.	.05mfd paper
R376.	380,000 ohms 1/2W	C376.	.05mfd paper
R377.	380,000 ohms 1/2W	C377.	.05mfd paper
R378.	380,000 ohms 1/2W	C378.	.05mfd paper
R379.	380,000 ohms 1/2W	C379.	.05mfd paper
R380.	380,000 ohms 1/2W	C380.	.05mfd paper
R381.	380,000 ohms 1/2W	C381.	.05mfd paper
R382.	380,000 ohms 1/2W	C382.	.05mfd paper
R383.	380,000 ohms 1/2W	C383.	.05mfd paper
R384.	380,000 ohms 1/2W	C384.	.05mfd paper
R385.	380,000 ohms 1/2W	C385.	.05mfd paper
R386.	380,000 ohms 1/2W	C386.	.05mfd paper
R387.	380,000 ohms 1/2W	C387.	.05mfd paper
R388.	380,000 ohms 1/2W	C388.	.05mfd paper
R389.	380,000 ohms 1/2W	C389.	.05mfd paper
R390.	380,000 ohms 1/2W	C390.	.05mfd paper
R391.	380,000 ohms 1/2W	C391.	.05mfd paper
R392.	380,000 ohms 1/2W	C392.	.05mfd paper
R393.	380,000 ohms 1/2W	C393.	.05mfd paper
R394.	380,000 ohms 1/2W	C394.	.05mfd paper
R395.	380,000 ohms 1/2W	C395.	.05mfd paper
R396.	380,000 ohms 1/2W	C396.	.05mfd paper
R397.	380,000 ohms 1/2W	C397.	.05mfd paper
R398.	380,000 ohms 1/2W	C398.	.05mfd paper
R399.	380,000 ohms 1/2W	C399.	.05mfd paper
R400.	380,000 ohms 1/2W	C400.	.05mfd paper
R401.	380,000 ohms 1/2W	C401.	.05mfd paper
R402.	380,000 ohms 1/2W	C402.	.05mfd paper
R403.	380,000 ohms 1/2W	C403.	.05mfd paper
R404.	380,000 ohms 1/2W	C404.	.05mfd paper
R405.	380,000 ohms 1/2W	C405.	.05mfd paper
R406.	380,000 ohms 1/2W	C406.	.05mfd paper
R407.	380,000 ohms 1/2W	C407.	.05mfd paper
R408.	380,000 ohms 1/2W	C408.	.05mfd paper
R409.	380,000 ohms 1/2W	C409.	.05mfd paper
R410.	380,000 ohms 1/2W	C410.	.05mfd paper
R411.	380,000 ohms 1/2W	C411.	.05mfd paper
R412.	380,000 ohms 1/2W	C412.	.05mfd paper
R413.	380,000 ohms 1/2W	C413.	.05mfd paper
R414.	380,000 ohms 1/2W	C414.	.05mfd paper
R415.	380,000 ohms 1/2W	C415.	.05mfd paper
R416.	380,000 ohms 1/2W	C416.	.05mfd paper
R417.	380,000 ohms 1/2W	C417.	.05mfd paper
R418.	380,000 ohms 1/2W	C418.	.05mfd paper
R419.	380,000 ohms 1/2W	C419.	.05mfd paper
R420.	380,000 ohms 1/2W	C420.	.05mfd paper
R421.	380,000 ohms 1/2W	C421.	.05mfd paper
R422.	380,000 ohms 1/2W	C422.	.05mfd paper
R423.	380,000 ohms 1/2W	C423.	.05mfd paper
R424.	380,000 ohms 1/2W	C424.	.05mfd paper
R425.	380,000 ohms 1/2W	C425.	.05mfd paper
R426.	380,000 ohms 1/2W	C426.	.05mfd paper
R427.	380,000 ohms 1/2W	C427.	.05mfd paper
R428.	380,000 ohms 1/2W	C428.	.05mfd paper
R429.	380,000 ohms 1/2W	C429.	.05mfd paper
R430.	380,000 ohms 1/2W	C430.	.05mfd paper
R431.	380,000 ohms 1/2W	C431.	.05mfd paper
R432.	380,000 ohms 1/2W	C432.	.05mfd paper
R433.	380,000 ohms 1/2W	C433.	.05mfd paper
R434.	380,000 ohms 1/2W	C434.	.05mfd paper
R435.	380,000 ohms 1/2W	C435.	.05mfd paper
R436.	380,000 ohms 1/2W	C436.	.05mfd paper
R437.	380,000 ohms 1/2W	C437.	.05mfd paper
R438.	380,000 ohms 1/2W	C438.	.05mfd paper
R439.	380,000 ohms 1/2W	C439.	.05mfd paper
R440.	380,000 ohms 1/2W	C440.	.05mfd paper
R441.	380,000 ohms 1/2W	C441.	.05mfd paper
R442.	380,000 ohms 1/2W	C442.	.05mfd paper
R443.	380,000 ohms 1/2W	C443.	.05mfd paper
R444.	380,000 ohms 1/2W	C444.	.05mfd paper
R445.	380,000 ohms 1/2W	C445.	.05mfd paper
R446.

WESTINGHOUSE WR870 AND WR1990

5-Valve, Two Band, Battery Operated

R1. 100,000 ohms 1/3W
R2. 40,000 ohms 1W
R3. 400 ohms 1/3W
R4. 100,000 ohms 1/3W
R5. 100,000 ohms 1W
R6. 50,000 ohms 1/3W
R7. 40,000 ohms 1W
R8. 300 ohms 1/3W
R9. 100,000 ohms 1W
R10. 20,000 ohms 1/3W
R11. 500,000 ohms Vol.Control
R12. 1 megohm 1W
R13. 1.75meg.1/3W
R14. 2.3meg.1/3W
R15. 250,000ohms1W
R16. 390,000 ohms1/3W
R17. 200,000 " "
R18. 15,000 ohms "
R19. 100,000 ohms "
R20. 1.75meg. 1/3W
C1. 4mmfd mica
C2. 2-20mmfd air trimmer
C3. .05mfd paper
C5. .05mfd paper
C4. 8-26mmfd air trimmer
C6. 440mmfd mica (padder)
C . 16-34mmfd air trimmer
C8. .05mfd paper
C9. 2-10mmfd air trimmer
C10. 4000mmfd mica Padder
C11. .05mfd paper
C12. Tuning Cond.
C13. .1mfd paper
C14. .1mfd paper
C15. 115mmfd mica A
C16. 130mmfd mica H
C17. .05mfd paper
C18. 110mmfd mica L
C19. Tuning Cond.
C20.8mfd 450V elec.
C21. .02mfd paper
C22. .1mfd paper
C23. 115mmfd mica A
C24. 130mmfd mica H
C25. 70mmfd mica N
C26..1mfd paper
C27..02mfd paper
C28.110mmfd mica L
C29..01mfd paper
C30.110mmfd mica L
C31..1mfd paper
C32.50mmfd mica D
C33.115mmfd mica A
C34. .05mfd paper
C35. .0025mfd paper
C36. .05mfd paper
C37. 2000mmfd mica

WESTINGHOUSE WR880 AND WR1900

5-Valve, Two Band, Vibrator Operated

R1. 400 ohms 1/3W
R2. 50,000 ohms 1/3W
R3. 100,000 " "
R4. 20,000 ohms 1W
R5. 300 ohms 1/3W
R6. 100,000 ohms 1W
R7. 600 ohms 1/3W
R8. 70,000 ohms 1W
R9. 500,000 ohms1/3W
R10. 500,000 ohms Vol.Control
R11. 20,000 ohms1/3W
R12. 1.75meg.1/3W
R13. 1.75meg.1/3W
R14. 500,000 ohms 1W
R15. 2.3meg.1/3W
R16. 2.3meg.1/3W
R17. 250,000 ohms 1W
R18. 20,000 ohms 1W
R19. 390,000 ohms1/3W
R20. 100,000 " "
R21. 200,000 " "
R22. 15,000 ohms "
R23. 100,000 " "
R24. 450 ohms 3W
R25. 400 ohms 1/3W
C1. 4mmfd mica
C2. 2-20mmfd air trimmer
C3. 11-29mmfd air trimmer
C4. .05mfd paper
C5. 16-34mmfd air trimmer
C6. 440mmfd mica (padder)
C7. 2-10mmfd air trimmer
C8. 4000mmfd mica (padder)
C9. .05mfd paper
C10. .05mfd paper
C11. Tuning Cond.
C12. 70mmfd mica N
C13. .1mfd paper
C14. Tuning Cond.
C15. .1mfd paper
C16. 115mmfd micaA
C17. 130mmfd micaH
C18. .1mfd paper
C19. .05mfd paper
C20. 115mmfd micaA
C21. 130mmfd micaH
C22. .05mfd paper
C23. 70mmfd mica N
C24. 110mmfd micaL
C25. .02mfd paper
C26. 110mmfd micaL
C27. .1mfd paper
C28. 50mmfd mica D
C29. 200mmfd micaJ
C30. .02mfd paper
C31. 700mmfd mica
C32. .5mfd paper
C33. 2000mmfd mica
C34. .05mfd paper
C35. .0025mfd pap.
C36. 1000mmfd mica
C37. .1mfd paper
C38. .5mfd paper
C39. 1000mmfd mica
C40. .5mfd paper
C41. 8mfd 525PVelec
C42. 8mfd 525PV "
C43. .01mfd paper
C44. .01mfd paper
C45. .01mfd paper
C46. .01mfd paper
C47. 300mmfd mica
C48. .5mfd paper
C49. 200mmfd micaJ
C50. .1mfd paper
C51. .1mfd paper
C52. 400mfd 12PV elec.

WESTINGHOUSE WR1960

5-Valve, Two Band, Push Button, A.C. Operated

R1. 300 ohms 1/3W
R2. 50,000 ohms "
R3. 8,000 ohms 1W
R4. 6,000 ohms 2W
R5. 100,000 ohms1/3W
R6. 1.75meg.1/3W
R7. 2.3meg.1/3W
R8. 40 ohms 3W
R9. 20,000 ohms
R10. 50,000 ohms1/3W
R11. 500,000 ohms Vol.Control
R12. 10megohms 1W
R13. 250,000 ohms 1W
R14. 20,000 ohms 1W
R15. 250 ohms 3W
R16. 50,000 ohms1/ W
R17. 500,000 "
R18. 1.75meg. 1W
R19. 100,000 ohms Tone Control
C1. 4mmfd mica
C2. 2-20mmfd air trimmer
C3. .05mfd paper
C4. 2-20mmfd air trimmer
C5. Tuning Cond.
C6. 260mmfd mica
C7. 2000mmfd mica
C8. 11-29mmfd air trimmer
C9. 440mmfd mica (Padder)
C10. 2-10mmfd air trimmer
C11. 4000mmfd mica (Padder)
C12. .05mfd paper
C13. 900mmfd mica
C14. 70mmfd mica N
C15. Tuning Cond.
C16. 200mmfd temp. comp.
C17. 32-50mmfd air trimmer
C18. 43mmfd mica
C19. .05mfd paper
C20. 70mmfd mica N
C21. 70mmfd mica N
C22. 4mmfd mica
C23. .02mfd paper
C24. 70mmfd mica N
C25. 70mmfd mica N
C26. 110mmfd micaL
C27. .1mfd paper
C28. .01mfd paper
C29.110mmfd micaL
C30. 50mmfd " D
C31. 200mmfd " J
C32. .02mfd paper
C33. 25mfd 25Velec.
C34. .0025mfd paper
C35. .1mfd paper
C36. .5mfd paper
C37. 16mfd 350PV elec.Regulat.
C38. .1mfd paper
C39. 16mfd 500Velec
C40.9mmfd mica B

WESTINGHOUSE WR860 AND WR1970

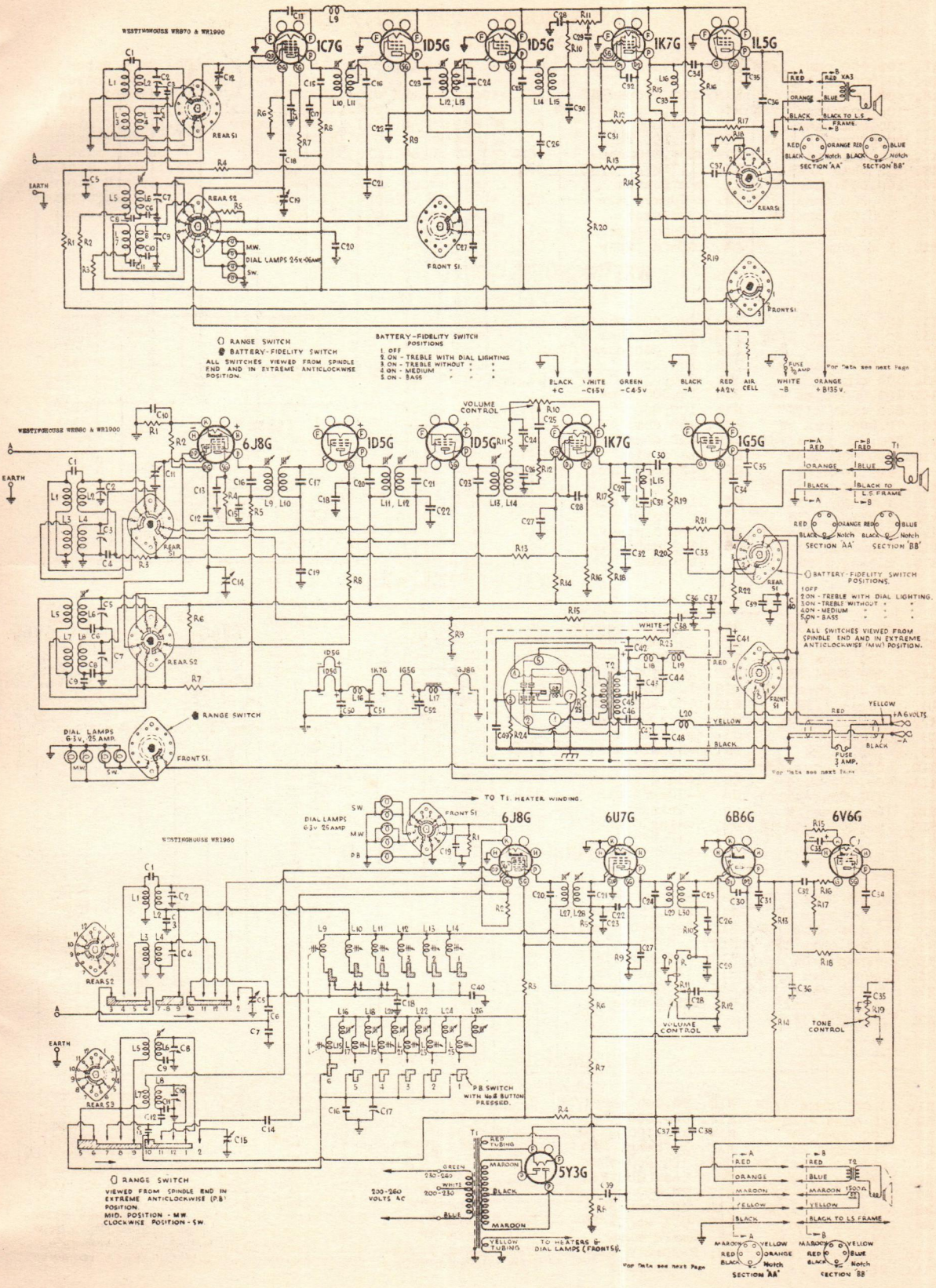
4-Valve, One Band, Battery Operated

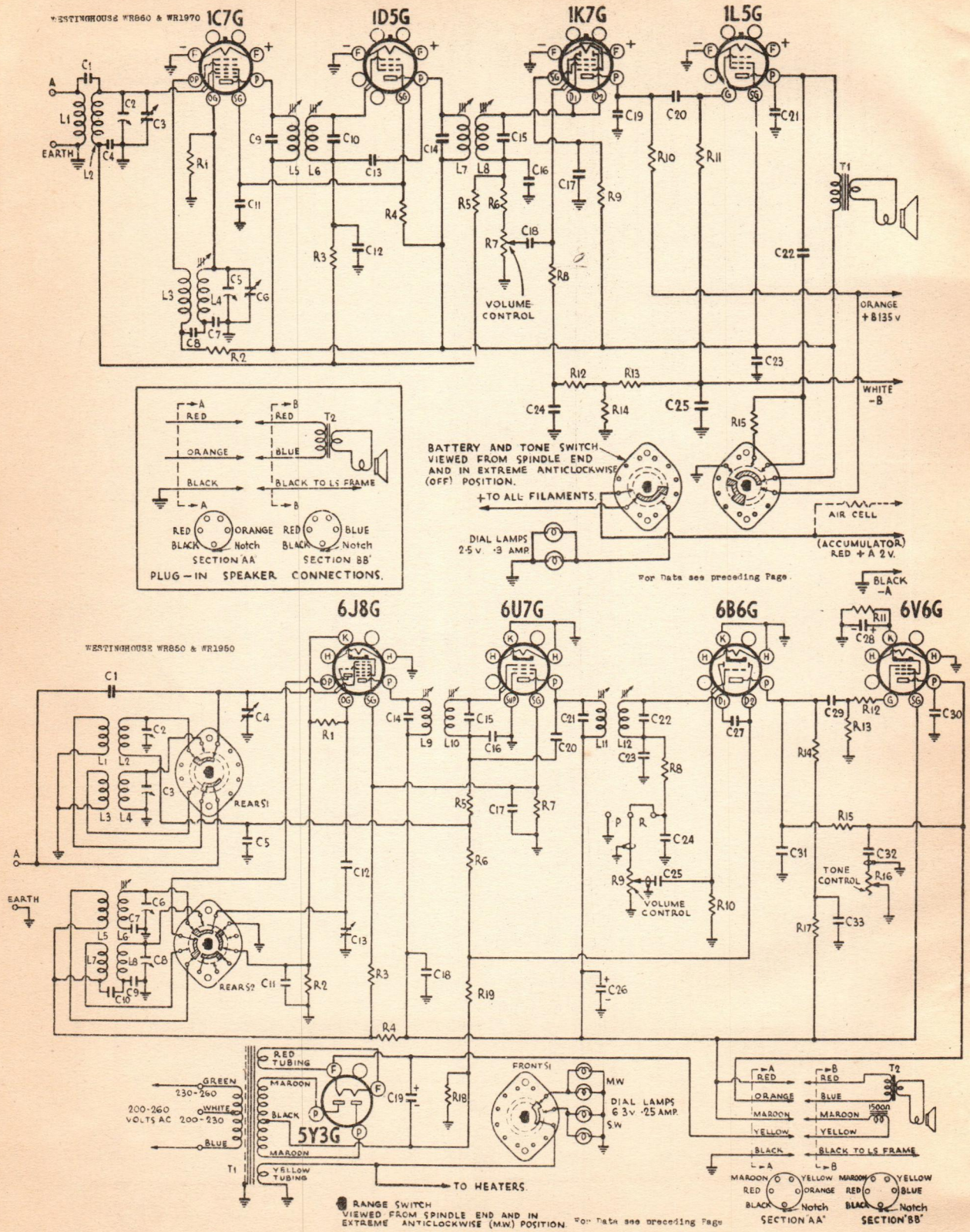
R1. 50,000 ohns 1/3W
R2. 50,000 ohms 1W
R3. 100,000 ohms1/3W
R4. 40,000 ohms 1W
R5. 1.75meg.1/3W
R6. 50,000 ohms 1/3W
R7. 500,000 ohms Vol.Control
R8. 1.75meg.1/3W
R9. 1megohm 1W
R10. 250,000 ohms 1W
R11. 500,000 ohms1/3W
R12. " " " "
R13. 200 ohms 1W
R14. 100 ohms 1W
R15. 10,000 ohms 1/3W
C1. 4mmfd mica
C2. 6-14mmfd air trimmer
C3. Tuning Cond.
C4. .05mfd paper
C5. 16-24mmfd air trimmer
C6. Tuning Cond.
C7. 420mmfd mica (Padder)
C8. .05mfd paper
C9. 70mmfd mica N
C10.70mmfd mica N
C11. .1mfd paper
C12. .01mfd paper
C13. 4mmfd mica
C14. 70mmfd micaN
C15. 70mmfd micaN
C16. 200 " " J
C17. .1mfd paper
C18. .01mfd paper
C19. 350mmfd mica
C20. .01mfd paper
C21. 1000mfd mica
C22. .035mfd paper
C23. .5mfd paper
C24. .1mfd paper
C25. 25mfd 40Velec.

WESTINGHOUSE WR850 AND WR1950

5-Valve, Two Band, A.C. Operated

R1. 50,000 ohms 1/3W
R2. 350 ohms 1/3W
R3. 8000 ohms 1W
R4. 6000 ohms 2W
R5. 100,000 ohms1/3W
R6. 1.75meg.1/3W
R7. 20,000 ohms 1W
R8. 50,000 " 1/3W
R9. 500,000 ohms Vol.Control
R10. 10megohms 1W
R11. 250 ohms 3W
R12. 50,000 ohms1/3W
R13. 500,000 " "
R14. 250,000 " 1W
R15. 1.75meg. 1W
R16. 100,000 ohms Tone Control
R17. 20,000 ohms 1W
R18. 40 ohms 3W
R19. 2.3 meg.1/3W
C1. 4mmfd mica
C2. 2-20mmfd air trimmer
C3. 2-20mmfd air trimmer
C4. Tuning Cond.
C5. .05mfd paper
C6. 11-29mmfd air trimmer
C7. 440mmfd mica (Padder)
C8. 2-10mmfd air trimmer
C9. 4000mmfd mica
C10. .05mfd paper
C11. .05mfd paper
C12. 70mmfd mica N
C13. Tuning Cond.
C14. 70mmfd mica N
C15. 70mmfd mica N
C16. .01mfd paper
C17. .1mfd paper
C18. .1mfd paper
C19. 16mfd 500VelecC20. 4mmfd mica
C21. 70mmfd mica N
C22. 70mmfd mica N
C23.110mmfd mica L
C24. " " " "
C25. .01mfd paper
C26. 16mfd elec.
C27. 50mmfd mica D
C28. 25mfd 25Velec
C29. .02mfd paper
C30. .0025mfd pap.
C31. 200mmfd micaJ
C32. .1mfd paper
C33. .5mfd paper


WESTINGHOUSE WR870 & WR1900
1C7G
1D5G
1D5G
1K7G
1L5G
REAR S1
REAR S2
FRONT S1.
MW.
DIAL LAMPS 25V-06AMP
SW.
EARTH
RANGE SWITCH
BATTERY-FIDELITY SWITCH POSITIONS
1. OFF
2. ON - TREBLE WITH DIAL LIGHTING
3. ON - TREBLE WITHOUT " "
4. ON - MEDIUM " "
5. ON - BASS " "
ALL SWITCHES VIEWED FROM SPINDLE END AND IN EXTREME ANTICLOCKWISE POSITION.
BLACK +C
WHITE -C15V
GREEN -C4·5V
BLACK -A
RED +A2V
AIR CELL
WHITE -B
ORANGE +B135V.
FUSE 3 AMP.
For Data see next Page
WESTINGHOUSE WR880 & WR1900
6J8G
1D5G
1D5G
1K7G
1G5G
VOLUME CONTROL
SECTION 'AA'
SECTION 'BB'
BATTERY-FIDELITY SWITCH POSITIONS.
1 OFF
2 ON - TREBLE WITH DIAL LIGHTING.
3 ON - TREBLE WITHOUT " "
4 ON - MEDIUM " "
5 ON - BASS " "
ALL SWITCHES VIEWED FROM SPINDLE END AND IN EXTREME ANTICLOCKWISE (MW) POSITION.
DIAL LAMPS 6·3v, 25 AMP.
RANGE SWITCH
FUSE 3 AMP.
+A6 VOLTS
For Data see next Page
TO T1. HEATER WINDING.
WESTINGHOUSE WR1960
6J8G
6U7G
6B6G
6V6G
DIAL LAMPS 6·3v 25 AMP
SW
MW
P.B
REAR S2
REAR S3
FRONT S1
VOLUME CONTROL
TONE CONTROL
P.B. SWITCH WITH No 6 BUTTON PRESSED.
RANGE SWITCH
VIEWED FROM SPINDLE END IN EXTREME ANTICLOCKWISE (P.B) POSITION.
MID. POSITION - MW.
CLOCKWISE POSITION - SW.
5Y3G
200-260 VOLTS AC
TO HEATERS & DIAL LAMPS (FRONT S1).
SECTION 'AA'
SECTION 'BB'
For Data see next Page


WESTINGHOUSE WR860 & WR1970
1C7G
1D5G
1K7G
1L5G
VOLUME CONTROL
ORANGE +B135 v
WHITE -B
BATTERY AND TONE SWITCH VIEWED FROM SPINDLE END AND IN EXTREME ANTICLOCKWISE (OFF) POSITION.
+TO ALL FILAMENTS
DIAL LAMPS 2·5 v. ·3 AMP.
AIR CELL
(ACCUMULATOR) RED + A 2 V.
BLACK -A
For Data see preceding Page.
PLUG-IN SPEAKER CONNECTIONS.
SECTION AA
SECTION BB
WESTINGHOUSE WR850 & WR1950
6J8G
6U7G
6B6G
6V6G
REAR S1
REAR S2
TONE CONTROL
VOLUME CONTROL
EARTH
200-260 VOLTS AC
5Y3G
TO HEATERS
FRONT S1
DIAL LAMPS 6·3 v ·25 AMP.
RANGE SWITCH VIEWED FROM SPINDLE END AND IN EXTREME ANTICLOCKWISE (M.W.) POSITION.
For Data see preceding Page