THE FISK AWA RADIOLA

Model 92

FOUR VALVE, ONE BAND, A.C. OPERATED SUPERHETERODYNE

Technical Information & Service Data

ELECTRICAL SPECIFICATIONS

TUNING RANGE: 1600-550 Kc/s.

R.F. ALIGNMENT SETTINGS.
600 Kc/s. (L.F. Osc.), 1500 Kc/s. (H.F. Osc. and Aer.)

INTERMEDIATE FREQUENCY ..... 455 Kc/s.

POWER SUPPLY RATING ..... 200-260 V., 50-60 cycles
(Instruments with other voltage and frequency ratings available.)

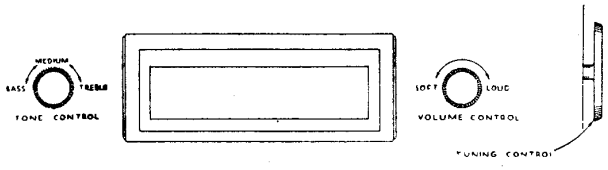
POWER CONSUMPTION ..... 60 watts

VALVE COMPLEMENT

6A8G Converter
6G8G I.F. Amp. and 2nd Det.
6V6G Output
5Y3G Rectifier

DIAL LAMPS ..... 6.3 V., .25 amp.

CONTROLS



LOUDSPEAKER

Moulded Cabinet ..... 5-inch Type AA8
Wooden Cabinet ..... 5-inch Type AA9
Loudspeaker Transformer XA1
Field Coil Resistance ..... 1000 ohms
Voice Coil Impedance ..... 3 ohms at 400 cycles

UNDISTORTED POWER OUTPUT ..... 4 watts

ALIGNMENT PROCEDURE.

As Radiolas are aligned at the factory with precision instruments, it is desirable that the adjustments be left at their original settings unless repairs have been made to the tuned circuits or tampering is suspected. It such is the case, complete re-alignment is advisable.

It is important to apply a definite procedure, as tabulated, and to use adequate and reliable test equipment. Instruments ideally suited to the requirements are the A.W.A. Junior Signal Generator, Type 2R3911, or the A.W.A. Modulated Oscillator, Type J6726. Greater accuracy will result if an output meter is used to give a visual indication of all adjustments made.

If an A.W.A. Modulated Oscillator is used, see that a 250,000 ohms resistor is connected between the output terminals of the instrument.

The ground connection of the test instrument should be connected to the earth terminal of the Radiola during all adjustments.

Perform alignment operations in the proper order, starting with No. 1 and following all operations across, then No. 2, etc. Adjustment points are shown in the layout diagrams. Keep the Volume Control of the Radiola set in the maximum clockwise position and regulate the output of the test instrument so that a minimum signal is introduced to give an observable indication on the output meter. This will avoid A.V.C. action and overloading.

ADJUSTMENT TOOLS.

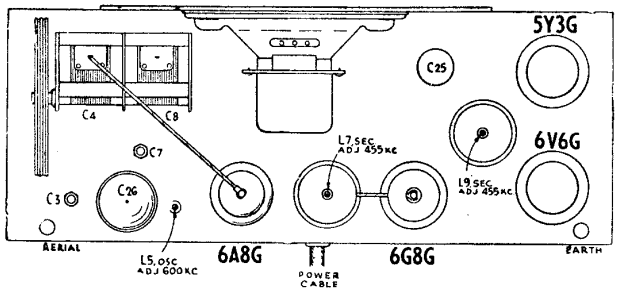
Two tools have been designed for use in the alignment of Radiolas. One is a combination tool for adjusting and locking air-trimmers (Part No. 5371) and the other is a non-metallic screwdriver for making L.F. oscillator and I.F. Transformer adjustments (Part No. 5372).

ALIGNMENT TABLE

Alignment Order.	Test Inst. Connection to Receiver.	Test Inst. Setting.	Receiver Dial Setting.	Adjust. Circuit to	Peak Output. Adjust for Max.
1.	*6A8G Grid Cap	455 Kc/s.	550 Kc/s.	2nd I.F. Trans.	L9
2.	*6A8G Grid Cap	455 Kc/s.	550 Kc/s.	2nd I.F. Trans.	L8
3.	*6A8G Grid Cap	455 Kc/s.	550 Kc/s.	1st I.F. Trans.	L7
4.	*6A8G Grid Cap	455 Kc/s.	550 Kc/s.	1st I.F. Trans.	L6
		Repeat the above adjustments before proceeding.			
5.	Aerial Terminal	600 Kc/s.	600 Kc/s.†	Oscillator	Core L4
6.	Aerial Terminal	1500 Kc/s.	1500 Kc/s.	Oscillator	C7
7.	Aerial Terminal	1500 Kc/s.	1500 Kc/s.	Aerial	C3
		Repeat adjustments 5, 6 and 7.			

* With grid clip connected. A .001 mfd. condenser should be connected in series with the "hot" output lead of the test instrument.

† Rock the Tuning Control back and forth through the signal. Reset the dial pointer to 600 Kc/s. if necessary. The pointer is soldered to the control wire and may be moved by applying a hot soldering iron to the connection.



Layout Diagram (Top View).

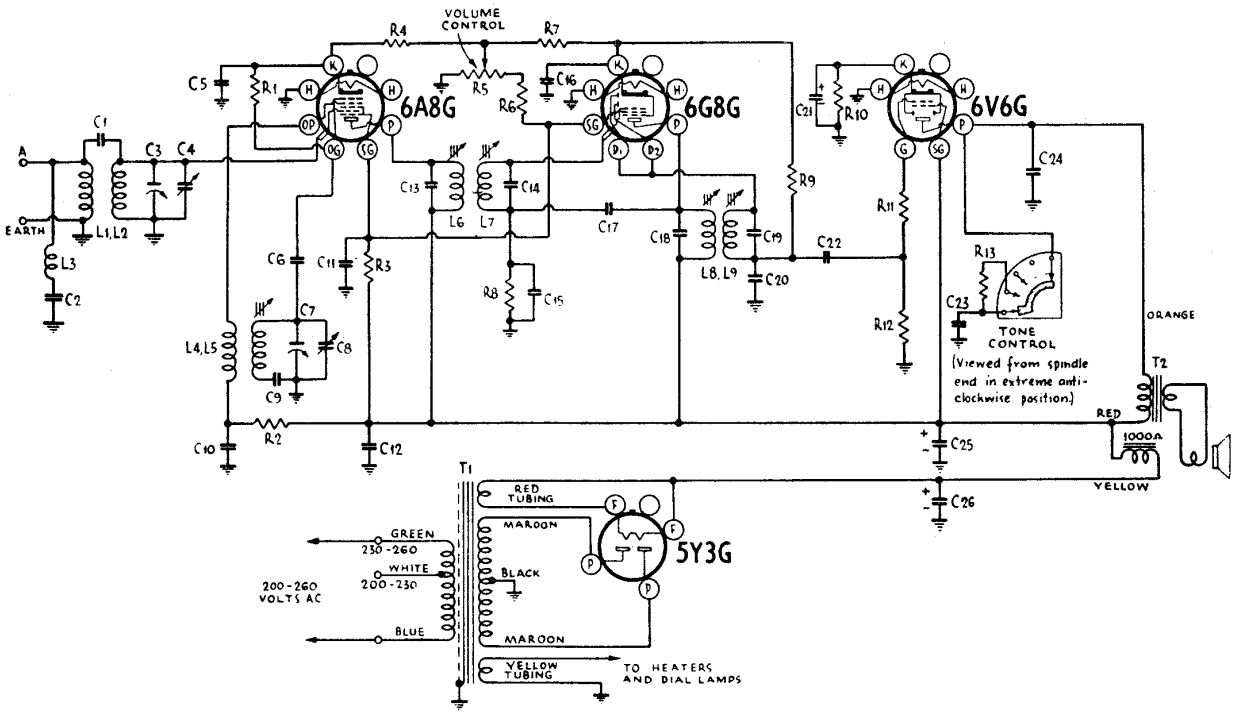
SOCKET VOLTAGES.

VALVE	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Plate to Chassis Volts	Plate Current M.A.	Filament Volts
6A8G Converter	2.7	95	250	3.0	6.3
Oscillator	—	—	160	4.0	—
6G8G I.F. Amp.					
2nd Det.	2.5	95	250	7.0	6.3
6V6G Output	11.0	250	230	40	6.3
5Y3G Rectifier	640/320 Volts, 60 M.A. Total Current 5.0				

Voltage across loudspeaker field — 60 volts.

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

CIRCUIT DIAGRAM AND CODE



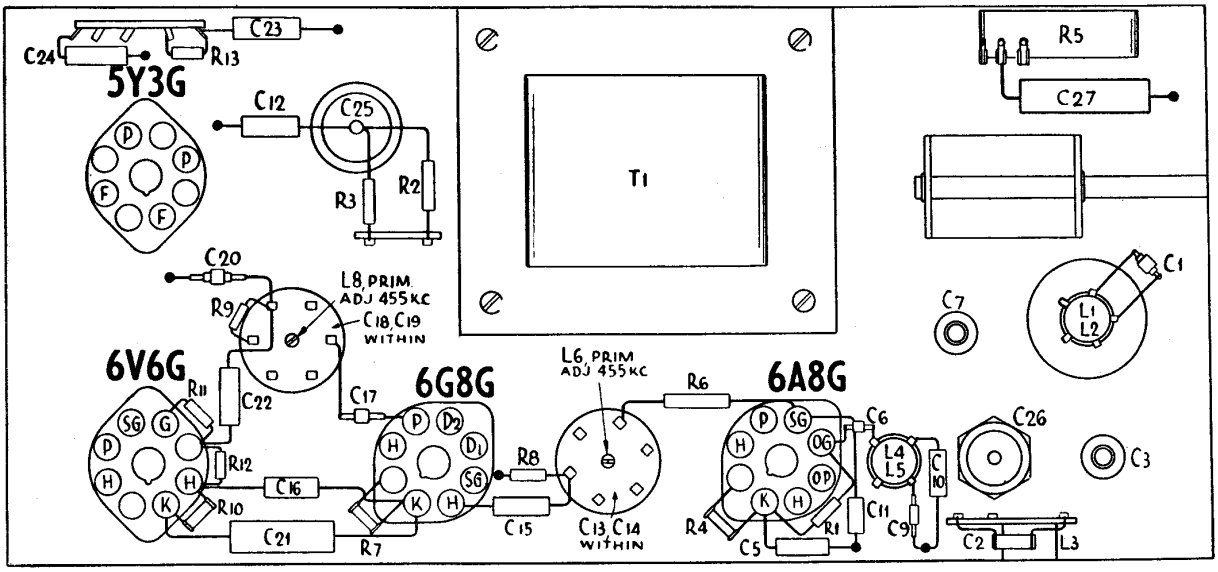
Condenser C27, which is not shown in the circuit diagram, is connected between the moving arm of the Volume Control (R5) and ground.

Code No.	Part No.	COILS
L1, L2	7647	Aerial Coil
L3, C2	9382	Filter Unit
L4, L5	7638	Oscillator Coil
L6, L7	9315	1st I.F. Transformer
L8, L9	9316	2nd I.F. Transformer

Code No.	Part No.	TRANSFORMERS
T1	7635	Power Transformer 50-60C
T1	7636	Power Transformer 40C
T2	XA1	Loudspeaker Transformer

Code No.	Part No.	RESISTORS
R1		50,000 ohms 1/3 W.
R2		20,000 ohms 1 W.
R3		20,000 ohms 2 W.
R4		300 ohms 1/3 W.
R5	9024	4,000 ohms W.W. Vol. Cont.
R6		40,000 ohms 1 W.
R7		300 ohms 1/3 W.
R8		100,000 ohms 1/3 W.
R9		500,000 ohms 1/3 W.
R10		250 ohms Wire Wound
R11		50,000 ohms 1/3 W.
R12		500,000 ohms 1/3 W.
R13		5,000 ohms 1/3 W.

Code No.	Part No.	CONDENSERS
C1		4 mmfd Mica
C2		50 mmfd Silvered Mica
C3	5462A	6-14 mmfd Air Trimmer
C4	7645	Tuning Condenser
C5		.1 mfd Paper
C6		70 mmfd Mica (N)
C7	4849A	16-24 mmfd Air Trimmer
C8	7645	Tuning Condenser
C9		420 mmfd Mica (Padder)
C10		.05 mfd Paper
C11		.1 mfd Paper
C12		.1 mfd Paper
C13		70 mmfd Silvered Mica
C14		70 mmfd Silvered Mica
C15		.01 mfd Paper
C16		.1 mfd Paper
C17		4 mmfd Mica
C18		70 mmfd Silvered Mica
C19		70 mmfd Silvered Mica
C20		110 mmfd Mica (L)
C21		25 mfd 40 V. Electro.
C22		.05 mfd Paper
C23		.05 mfd Paper
C24		.02 mfd Paper
C25		8 mfd 525 V. Dry Electro.
C26		8 mfd 500 V. Wet Electro.
C27		25 mfd 40 V. Electro. (C27 Not shown in circuit diagram)



Layout Diagram (Underneath View).

MECHANICAL REPLACEMENT PARTS.

DESCRIPTION.	PART No.
Dial Pointer and Drive Wire	8405
Dial Pointer Tension Spring	1741
Drive Wire Jockey Pulleys	1730
Drive Drum	5068
Tuning Control Spindle	8119
Tuning Control Extension Spindle	8078
Extension Spindle Coupling	8274
Dial Scale	7687
Loudspeaker Cone Assembly	8562

DESCRIPTION.	PART No.
Knobs—Volume and Tone	7482
Knob—Tuning Control (colour to be specified)	7483
Tuning Control Knob Clip	7686
Dial Lamp Sockets	4194
Tone Switch	
Valve Sockets	4704
Valve Shields	8147
Valve Clips	7459