

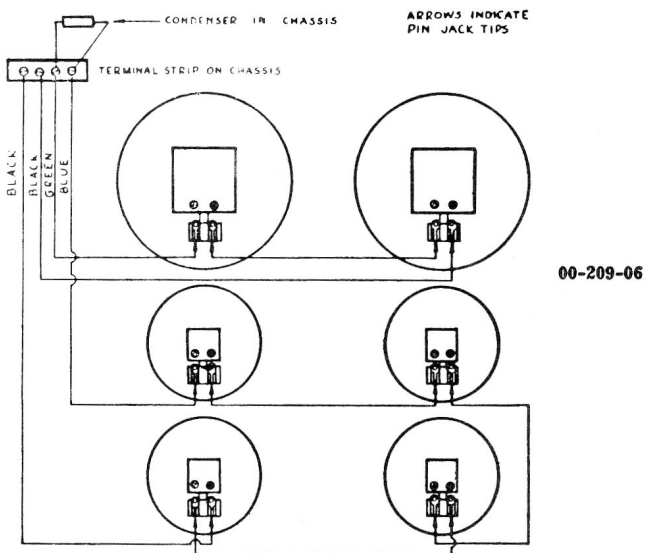
# VIKING Service Information for Models

**RC-304**  
**RC-308**  
**RC-311**  
**RC-325**

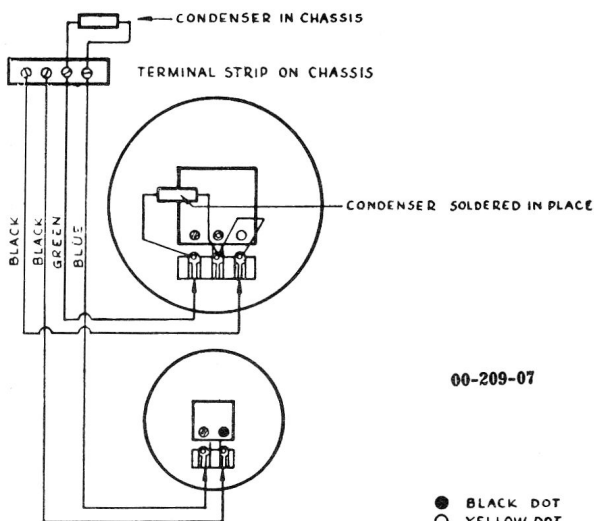
For Operation on 110-120 Volts A.C. Cycle as Marked

When writing for Service Information or Parts please quote Model Number, Serial Number and finish of cabinet.

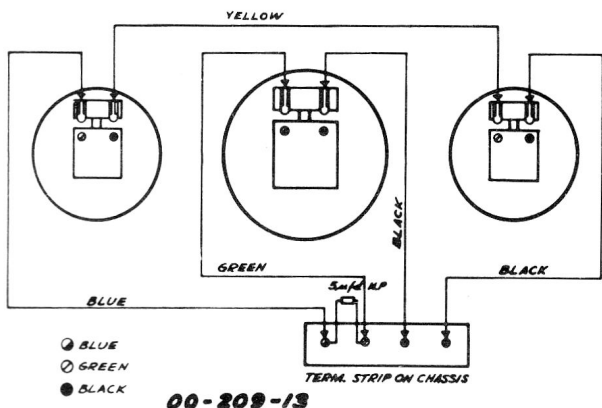
## SPEAKER CONNECTIONS



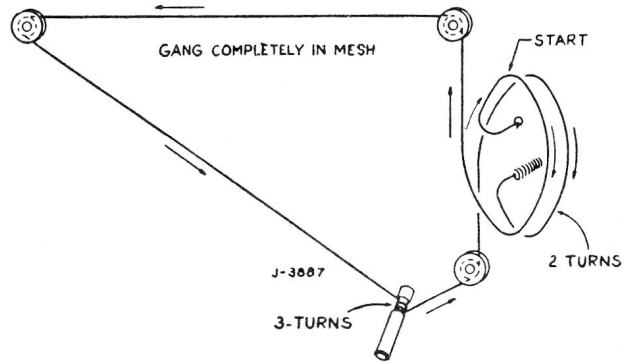
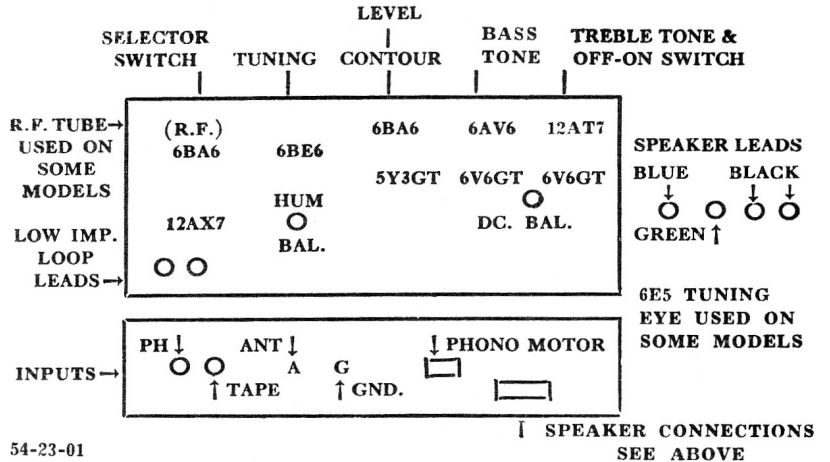
Used on RC-308 10 Tube Set



Used on RC-311 9 Tube Set



Used on RC-304, RC-325 8 Tube Set



## STRINGING DETAIL

## SPECIFICATIONS

Standard Broadcast Range ..... 535 Kc — 1650 Kc  
 Intermediate Frequency ..... 455 Kc  
 Power Consumption (Radio Only)

RC-304, RC-325 80 Watts  
 RC-308, RC-311 90 Watts

Power Consumption (Radio and Phono)

RC-304, RC-325 95 Watts  
 RC-308, RC-311 105 Watts

With tone controls in flat position, level and contour controls full clockwise, all measurements (nominal) taken at level control input and 16 ohm output.

Frequency Response — 1W level + 1 db., 30 cps to 15,000 cps.

\*Harmonic Distortion — Less than 1% at normal operating levels.

\*Intermodulation Distortion — Less than 1% at normal operating levels (60 and 3000 cps. 4:1)

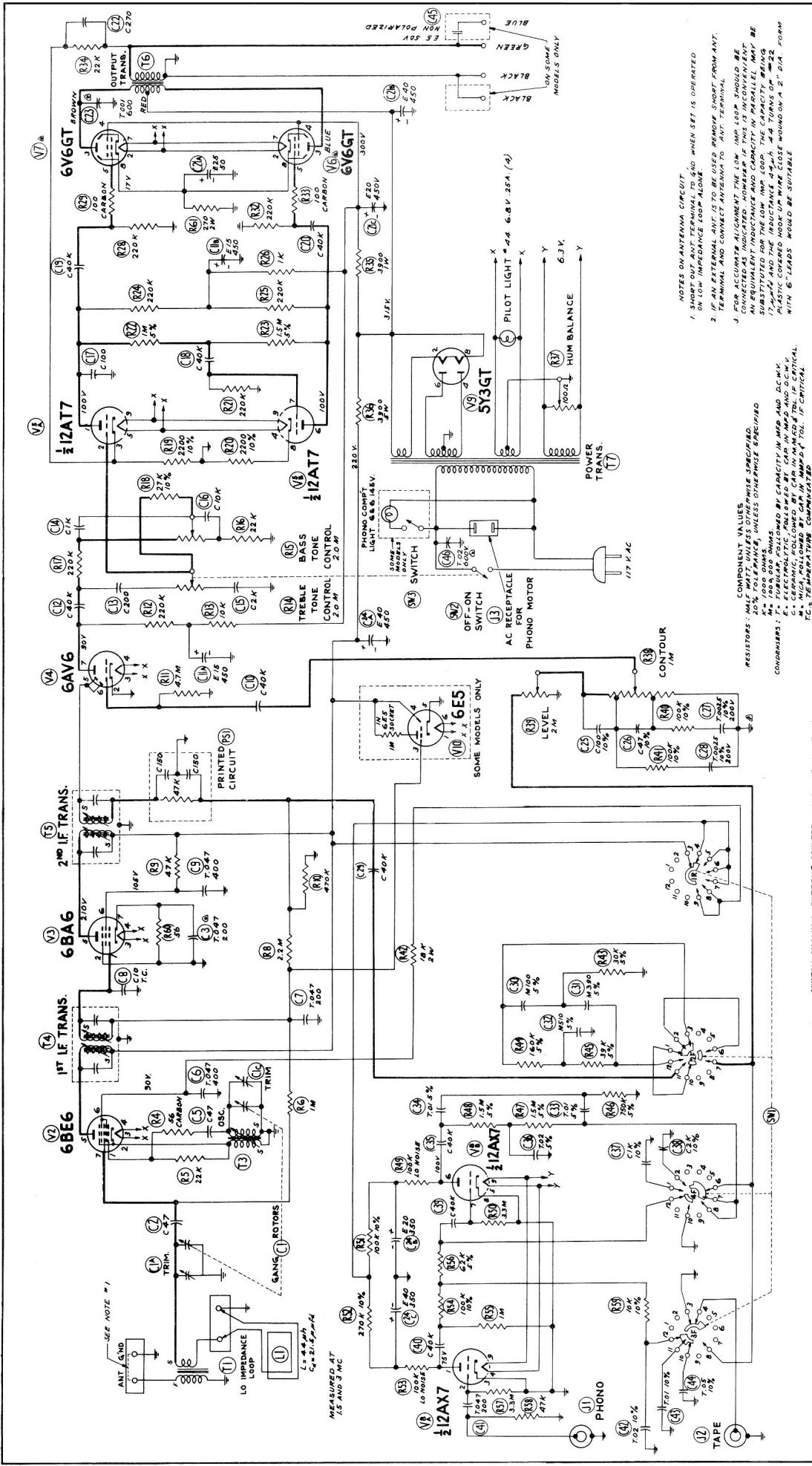
Hum and Noise — 80 db. below rated output.

Maximum Power Output at 400 C.P.S. — 15 Watts.  
 Undistorted Power Output at 400 C.P.S. — 10 Watts.

\*With matched output Tubes + 5%.

# Schematic for Model RC-304, RC-325, 8 Tube

NOTE - C10 CHANGED FROM C40K TO T.047 200V.



NOTES ON ANTENNA CIRCUIT:  
 1. SHOULD ONLY BE TERMINATED TO GND WHEN SET IS OPERATED.  
 2. IF AN EXTERNAL ANTENNA IS TO BE USED, PRIMARY SHOULD BE FROM ANT. TERMINAL AND SECONDARY TO ANT. TERMINAL.  
 3. FOR ACCURATE ALIGNMENT THE LOW IMP. LOOP SHOULD BE CONNECTED AS INDICATED, HOWEVER IF THIS IS INCONVENIENT AN EQUIVALENT INDUCTANCE AND CAPACITY IN PARALLEL MAY BE USED. TOLERANCE 20% UNLESS OTHERWISE SPECIFIED.  
 4. FOR THE INDUCTION COUPLING THE TURNS SHOULD BE 17.5 AND THE INDUCTIVE COUPLING SHOULD BE 0.25. PLASTIC COVERED WIRE CLOSE WOUND ON A 2" DIA. FORM WITH 6" LEADS WOULD BE SUITABLE.

COMPONENT VALUES:  
 RESISTORS: ALL VALUES IN OHMS AND DC MV. UNLESS OTHERWISE SPECIFIED.  
 CAPACITORS: ALL VALUES IN P.F. UNLESS OTHERWISE SPECIFIED.  
 CONDENSERS: P. = PAPER, F. = FIBRILAR, FOLLOWED BY CAPACITY IN MFD. AND D.C. MV. UNLESS OTHERWISE SPECIFIED.  
 M. = MIC. FOLLOWED BY CAP. IN MMFD. & TOL. IF CRITICAL.  
 T.C. = TEMPERATURE COMPENSATED.

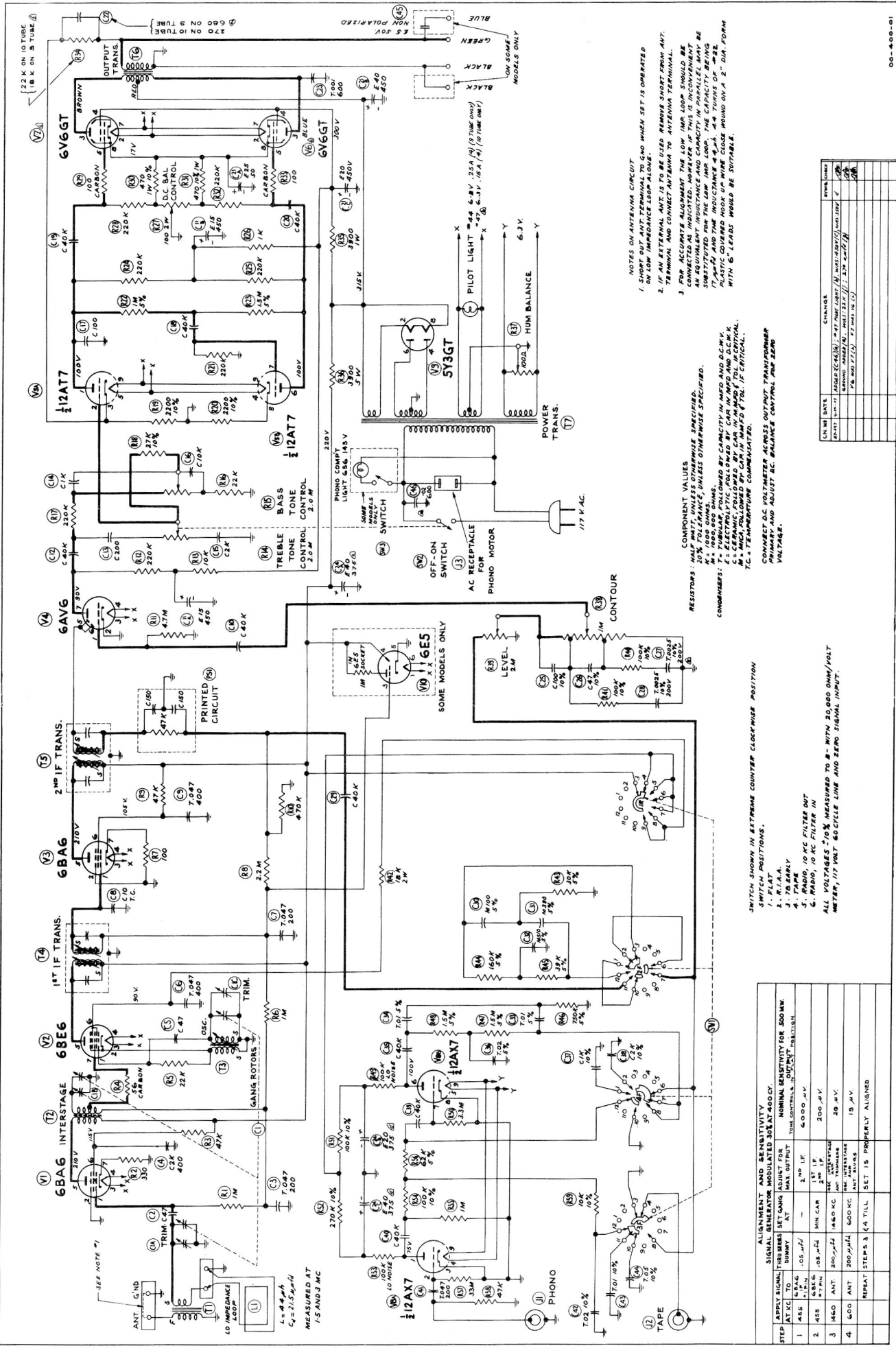
SWITCH POSITIONS:  
 1. ANTENNA  
 2. PL. A  
 3. PL. B  
 4. TAPE  
 5. RADIO, 10KC FILTER IN  
 6. RADIO, 10KC FILTER OUT  
 ALL VOLTAGES 2.0V. MEASURED TO B\* WITH 20,000 OHM/10LT  
 ANTENNA, 177VOLT AC CYCLE LINE AND ZERO SIGNAL INPUT

STEP	APPLY SIGNAL AT KC TO	SIGNAL GENERATOR THRESHOLD	RETAINING SWITCH POSITION	NORMAL SENSITIVITY FOR 0.05 MW
1	455	0.8 μV	2nd IF	1400 μV TONE CONTROLS FLAT
2	455	0.8 μV	3rd IF	85 μV TONE CONTROLS FLAT
3	1460	0.8 μV	OSC. TRIMMER	ADJUST OSC. SLUG 600 KC.
4	1460	0.8 μV	ANT. TRIMMER	ADJUST ANT. TRIMMER 31 μV TONE CONTROLS FLAT
5	600	0.8 μV	OSC. SLUG	30 μV TONE CONTROLS FLAT

UNIT	INSTR.	CHANGE	REASON
1	1000 OHMS	1000 OHMS	
2	1000 OHMS	1000 OHMS	
3	1000 OHMS	1000 OHMS	
4	1000 OHMS	1000 OHMS	
5	1000 OHMS	1000 OHMS	
6	1000 OHMS	1000 OHMS	
7	1000 OHMS	1000 OHMS	
8	1000 OHMS	1000 OHMS	
9	1000 OHMS	1000 OHMS	
10	1000 OHMS	1000 OHMS	
11	1000 OHMS	1000 OHMS	
12	1000 OHMS	1000 OHMS	
13	1000 OHMS	1000 OHMS	
14	1000 OHMS	1000 OHMS	
15	1000 OHMS	1000 OHMS	
16	1000 OHMS	1000 OHMS	
17	1000 OHMS	1000 OHMS	
18	1000 OHMS	1000 OHMS	
19	1000 OHMS	1000 OHMS	
20	1000 OHMS	1000 OHMS	
21	1000 OHMS	1000 OHMS	
22	1000 OHMS	1000 OHMS	
23	1000 OHMS	1000 OHMS	
24	1000 OHMS	1000 OHMS	
25	1000 OHMS	1000 OHMS	
26	1000 OHMS	1000 OHMS	
27	1000 OHMS	1000 OHMS	
28	1000 OHMS	1000 OHMS	
29	1000 OHMS	1000 OHMS	
30	1000 OHMS	1000 OHMS	
31	1000 OHMS	1000 OHMS	
32	1000 OHMS	1000 OHMS	
33	1000 OHMS	1000 OHMS	
34	1000 OHMS	1000 OHMS	
35	1000 OHMS	1000 OHMS	
36	1000 OHMS	1000 OHMS	
37	1000 OHMS	1000 OHMS	
38	1000 OHMS	1000 OHMS	
39	1000 OHMS	1000 OHMS	
40	1000 OHMS	1000 OHMS	

# Schematic for Model RC-308 10 Tube, RC -311 9 Tube

NOTE - C10 CHANGED FROM C40K TO T.047 200V.



ANT. GRID  
F  
L=4.4 μH  
C<sub>0</sub>=21.5 μF/4H  
MEASURED AT  
1.5 AND 3 MC

- NOTES ON ANTENNA CIRCUIT
- SWITCH ON TERMINAL TO GND WHEN SET IS OPERATED FOR IMPROVED RECEIVING QUALITY.
  - IF AN EXTERNAL ANT IS TO BE USED, PLEASE SHORT SWAY ANT. TERMINAL AND CONNECT ANTENNA TO ANTENNA TERMINAL.
  - FOR ACCURATE ALIGNMENT THE LOW IMP. LOOP SHOULD BE CONNECTED AS INDICATED. HOWEVER, IF THIS IS INCONVENIENT AN EQUIVALENT INDUCTANCE AND CAPACITY IN PARALLEL MAY BE USED. THE INDUCTANCE SHOULD BE APPROX. 4.4 μH AND THE CAPACITY APPROX. 21.5 μF. THE INDUCTANCE SHOULD BE WIRE COIL WOUND ON A 2" DIA. FORM WITH 6" LEADS WOULD BE SUITABLE.

RESISTOR VALUES

RESISTORS: 1% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

COMPONENTS: 1% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

RESISTORS: 5% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

COMPONENTS: 1% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

RESISTORS: 5% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

COMPONENTS: 1% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

RESISTORS: 5% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

COMPONENTS: 1% TOLERANCE, UNLESS OTHERWISE SPECIFIED.

SWITCH SHOWN IN EXTREME COUNTER CLOCKWISE POSITION

STEP	APPLY SIGNAL TO	THROBBLES AT	SET GAIN TO	ADJUST FOR	NOMINAL SENSITIVITY FOR 500 MC
1	485	485	100 μV	OSC. CONTROL	100 μV
2	485	485	100 μV	1ST IF	5000 μV
3	485	485	100 μV	2ND IF	200 μV
4	485	485	100 μV	ANT. INTERSTAGE	20 μV
	485	485	100 μV	ANT. INTERSTAGE	19 μV
				REPEAT STEPS 3 & 4 TILL SET IS PROPERLY ALIGNED	

ALL VOLTAGES ±10% MEASURED TO B+ WITH 20,000 OHM/VOLT METER, 1/2 WATT 60 CYCLE LINE AND ZERO SIGNAL INPUT.

CHG. NO.	DATE	BY	REASON

## HUM BALANCER

A Hum-Balancer has been incorporated in this receiver to balance out hum which may be present because of the high gain and wide frequency response of the audio portion of the receiver. It may be found necessary to re-adjust the hum balancer for minimum hum reproduction when the 12AX7 tube is replaced. Set the tone control in its extreme left hand position, turn the selector switch to phono position, the volume control full on and adjust the hum-balancer for minimum hum level.

### REPLACEMENT PARTS LIST

Symbol	Part No.	Description
C1	45-1-01	Gang Cond. Geared 3-Section (RC-311, RC-308 only)
C1	45-2-01	Gang Cond. Geared 2-Section (RC-304, RC-325 only)
C8	G-624-7	Cond. Ceramic 10 uuf. $\pm$ 10% N-750
C11	44-4-01	Electrolytic 15 & 15ufd. x 450 DCWV
C21	44-2-01	Electrolytic 40 & 20 ufd x 450 DCWV, 25ufd x 50 DCWV
C24	44-3-01	Electrolytic 40, 40 & 20ufd x 375 DCWV
C-27, C28	G-629-8	Cond. Tubular .0025ufd. $\pm$ 10% 200V
C33, C34	G-629-1	Cond. Tubular .01ufd $\pm$ 5% 200V
C36	G-629-2	Cond. Tubular .02ufd $\pm$ 5% 200V
C42	G-629-4	Cond. Tubular .02ufd $\pm$ 10% 400V
C43	G-629-3	Cond. Tubular .01ufd $\pm$ 10% 400V
C44	G-629-5	Cond. Tubular .05ufd $\pm$ 10% 200V
C45	44-5-01	Electrolytic 5ufd x 20V AC Non Polarized
L1	51-1-01	Loop Antenna Assembly
PS1	50-1-01	Printed Circuit — Filpec
R14 & SW2	41-4-01	Treble Tone Control and Switch
R15	41-3-01	Bass Tone Control
R27	41-6-01	DC Balance Control (RC-308, RC-311 Only)
R36	42-1-13	Resistor Wirewound 3900 ohm $\pm$ 10%
R37	41-6-01	Hum Balance Control
R38, R39	41-5-01	Dual Contour and Level Control
R49, R53	42-2-03	Resistor Low Noise 100K ohm $\pm$ 10% $\frac{1}{2}$ W
SW1	26-1-01	Selector Switch
T1	21-406-01	BC Antenna Coil (RC-304, RC-325 only)
T1	21-403-01	BC Antenna Coil (RC-308, RC-311 only)
T2	21-401-01	BC Interstage Coil
T3	21-402-01	BC Oscillator Coil (RC-304, RC-325 only)
T3	21-402-02	BC Oscillator Coil (RC-308, RC-311 only)
T4, T5	21-404-01	I.F. Transformer
T6	24-80002-01	Audio Output Transformer 8 ohm (RC-311 only)
T6	24-80003-01	Audio Output Transformer 16 ohm (RC-304, RC-308, RC-325 only)
T7	24-10002-01	Power Transformer 60 cycle
T7	24-20002-01	Power Transformer 25 cycle

### MISCELLANEOUS

Part No.	Description
03-160001-03	4-Speed RC-88 Changer 60 cy. complete (RC-304, RC-325 only)
03-160002-03	4-Speed RC-88 Changer 25 cy. complete (RC-304, RC-325 only)
03-160001-08	4-Speed RC-88 Changer 60 cy. complete (RC-311 only)
03-160002-08	4-Speed RC-88 Changer 25 cy. complete (RC-311 only)
03-160001-07	4-Speed RC-88 Changer 60 cy. complete (RC-308 only)
03-160002-07	4-Speed RC-88 Changer 25 cy. complete (RC-308 only)
16-120004-01	Garrard 45 RPM Spindle
16-250001-01	G.E. Cartridge
19-50001-01	5" P.M. Speaker (4 on RC-308)
19-50002-01	5" P.M. Speaker (2 on RC-304, RC-325)
19-80001-01	8" P.M. Speaker (1 on RC-311)
19-100001-01	10" P.M. Speaker (2 on RC-308)
19-120001-01	12" P.M. Speaker (1 on RC-304, RC-325)
19-240001-01	12" Triaxial (1 on RC-311)
27-1-01	Pilot Lamp 6-8V .25A #44 (RC-304, RC-311, RC-325 only)
27-2-01	Pilot Lamp 6.3V .15A #47 (RC-308 only)
30-2-01	Dial Scale (RC-304, RC-325 only)
30-3-01	Dial Scale (RC-308, RC-311 only)
30-4-01	Control Panel (RC-304, RC-325 only)
30-4-02	Control Panel (RC-308, RC-311 only)
34-5-17	Line Cord and Plug Assembly (7' 6")
34-7-01	Pilot Lamp Socket and Lead Assembly (14")
35-5-01	Drive Shaft
35-59-01	Pointer and Slider Assembly
53-9-06	Glass Retaining Strip
53-15-01	Colour Tone Disc (Treble)
53-15-02	Colour Tone Disc (Bass)
53-16-01	Knob (Level Control)
53-17-01	Knob (Contour Control)
53-18-01	Knob (Tuning)
53-18-02	Knob (Treble and Bass Tone Control)

#### Replacement Needles for G.E. Cartridge

LP	RPJ-01S Sapphire	*RPJ-01D (Diamond)
78	RPJ-03S Sapphire	

\* This is not supplied as original equipment. It may be procured as a replacement for RPJ-01S needle if a diamond stylus is preferred.