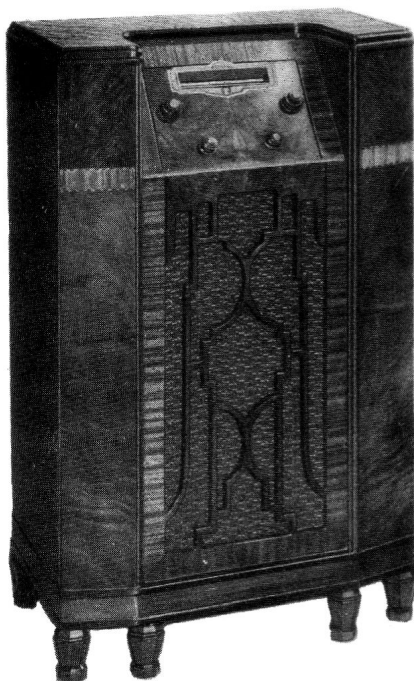


Models 62, 62A, 63, 63A

Radio Receivers



Specifications

Frequency Range:

Broadcast—530 to 1600 K.C.

Short Wave—5.6 to 15.4 megacycles

I.F.:

462.5 K.C.

Tubes:

Type	Position
78	R.F. Amplifier
6A7	1st Detector, Oscillator
6F7	1st I.F. and 1st A.F.
6B7	2nd I.F.; A.V.C.; 2nd Detector
42	Output
80	Rectifier

Power Supply:

Models 62, 63: 105 to 125 volts A.C.
60 cycles.

Models 62A, 63A: 105 to 125 volts A.C.
25 cycles.

A.V.C.:

On Types 6F7, 6A7 and 78 tubes

Controls:

From left to right—volume control; A.C. switch and tone control; wave change switch; tuning control.

Cabinets:

Model 62, 62A—Mantel

Model 63, 63A—Angle Tuning Cabinet.

MODELS 62-62A, 63-63A RADIO RECEIVERS

OUTPUT
4.2

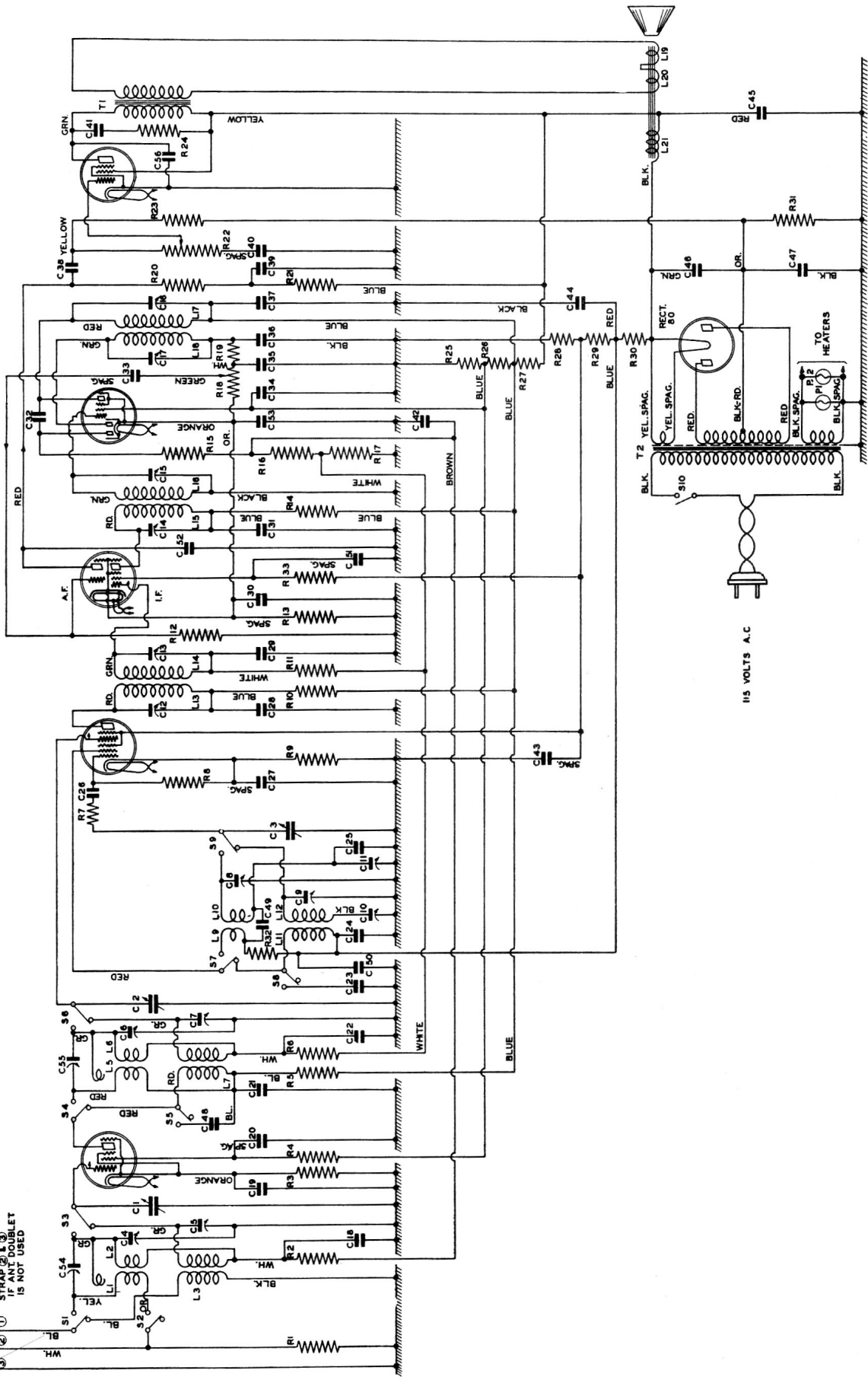
2ND I.F.
2ND DET. & A.V.C.
6B7

1ST I.F. (482.5 KC.)
1ST A.F.
6B7

1ST DET. OSC.
6A7

RF
78

① STRAP @ L. ②
IF ANT. DOUBLET
IS NOT USED



Schematic Diagram Model 62-63 Receivers

REPLACEMENT PARTS LIST

CAPACITORS:—

	Part No.
C-1 First R.F. transformer secondary.....	K-1372-2
C-2 Second R.F. transformer secondary.....	
C-3 Oscillator tuning.....	
C-4 Trimmer first R.F. transformer secondary—Short wave band, 7-70 mmf.....	
C-5 Trimmer first R.F. transformer secondary—Broadcast, 5-30 mmf....	K-1515-1
C-6 Trimmer second R.F. transformer secondary—Short wave band, 7-70 mmf.....	
C-7 Trimmer second R.F. transformer secondary—Broadcast, 5-30 mmf....	K-1515-1
C-8 Trimmer, oscillator padding—Short wave band—5-30 mmf.....	
C-9 Trimmer, oscillator padding—Broadcast band—7-70 mmf.....	K-1515-2
C-10 Trimmer, oscillator lag—Broadcast band—300-800 mmf.....	
C-11 Trimmer, oscillator lag—Short wave band—300-800 mmf.....	K-1368-4
C-12 Trimmer, first I.F. transformer primary—35-130 mmf.....	
C-13 Trimmer, first I.F. transformer secondary—35-130 mmf.....	K-1368-1
C-14 Trimmer, second I.F. transformer primary—20-100 mmf.....	
C-15 Trimmer, second I.F. transformer secondary—20-100 mmf.....	K-1368-1
C-16 Trimmer, third I.F. transformer primary—20-100 mmf.....	
C-17 Trimmer, third I.F. transformer secondary—20-100 mmf.....	K-2227-8
C-18 A.V.C. by-pass; .05 mf; 175 volts..	
C-19 Cathode by-pass; .05 mf; 175 volts..	K-2227-8
C-20 Screen by-pass; .05 mf; 175 volts..	
C-21 Plate filter; .05 mf; 350 volts.....	K-2228-8
C-22 A.V.C. by-pass; .05 mf; 175 volts..	
C-23 Oscillator broadcast coil shorting, short wave band; .05 mf; 350 volts.....	K-2228-6
C-24 Oscillator anode by-pass; .01 mf; 350 volts.....	
C-25 Fixed oscillator lagging, short wave band; 3500 mmf; mica.....	K-1952-15
C-26 Oscillator grid blocking; 100 mmf; mica.....	
C-27 Cathode by-pass; .05 mf; 175 volts..	K-2227-8
C-28 Plate filter; .05 mf; 350 volts.....	
C-29 A.V.C. by-pass; .05 mf; 175 volts..	K-2227-8
C-30 Cathode by-pass; .05 mf; 175 volts..	
C-31 Plate by-pass; .05 mf; 350 volts....	K-1611-2
C-32 D.C. blocking (diode paralleling); 100 mmf; mica.....	
C-33 D.C. blocking; .05 mf; 175 volts..	K-2227-8

CAPACITORS—continued:—

	Part No.
C-34 Screen by-pass; .05 mf; 175 volts..	K-2227-8
C-35 I.F. filter; 100 mmf; mica.....	K-1611-2
C-36 I.F. filter; 100 mmf; mica.....	K-1611-2
C-37 Plate by-pass; .05 mf; 350 volts....	K-2228-8
C-38 D.C. blocking; .005 mf; 350 volts..	K-2228-5
C-39 Plate by-pass; .25 mf; 350 volts....	K-2228-10
C-40 Tone control; .002 mf; 350 volts..	K-2228-2
C-41 Impedance equalizer; .02 mf; 175 volts.....	K-2227-7
C-42 A.V.C. by-pass; .05 mf; 175 volts..	K-2227-8
C-43 First detector screen by-pass; .05 mf; 175 volts.....	K-2227-8
C-44 Divider by-pass; 16 mf; 300 volts..	K-1442
C-45 Power filter—4 mf; 350 volts.....	K-1374
C-46 Power filter—8 mf; 450 volts.....	
C-47 Bias by-pass—20 mf; 25 volts.....	K-1611-2
C-48 Second R.F. transformer primary shorting—100 mmf; mica.....	
C-49 Oscillator filter; 100 mmf; mica....	K-1611-2
C-50 Oscillator anode by-pass; .05 mf; 350 volts.....	K-2228-8
C-51 Screen by-pass; .05 mf; 175 volts..	K-2227-8
C-52 First audio plate I.F. filter; 100 mf; mica.....	K-1611-2
C-53 Second detector cathode by-pass; .05 mf; 175 volts.....	K-2227-8
C-54 Trimmer R.F. transformer coupling—Short wave band; 3-20 mmf....	K-1458-1
C-55 Trimmer, second R.F. transformer coupling—Short wave band; 3-20 mmf.....	K-1458-1
C-56 Output plate, I.F. filter; .002 mf; 350 volts.....	K-2228-2

RESISTORS:—

	Part No.
R-1 Antenna leak; 1/10 meg.; 1/2 watt..	K-2226-5
R-2 A.V.C. filter; 1/10 meg.; 1/2 watt..	K-2226-5
R-3 Cathode bias; 500 ohms; 1/2 watt..	K-2226-18
R-4 Screen; 10,000 ohms; 1/2 watt.....	K-2226-10
R-5 Plate; 1,000 ohms; 1/2 watt.....	K-2226-16
R-6 A.V.C. filter; 1/10 meg.; 1/2 watt..	K-2226-5
R-7 Oscillator grid ballast; 50 ohms; 1/2 watt.....	K-2226-25
R-8 Oscillator grid leak; 50,000 ohms; 1/2 watt.....	K-2226-6
R-9 Cathode bias; 500 ohms; 1/2 watt..	K-2226-18
R-10 Plate; 5,000 ohms; 1/2 watt.....	K-2226-12
R-11 A.V.C. filter; 1/10 meg.; 1/2 watt..	K-2226-5
R-12 Audio grid leak; 1/2 meg.; 1/2 watt..	K-2226-3
R-13 Cathode bias; 1,000 ohms; 1/2 watt..	K-2226-16
R-14 Plate; 1,000 ohms; 1/2 watt.....	K-2226-16
R-15 A.V.C. load; 1/2 meg.; 1/2 watt....	K-2226-3
R-16 A.V.C. load; 1/2 meg.; 1/2 watt....	K-2226-6
R-17 A.V.C. load; 1/4 meg.; 1/2 watt....	K-2226-3
R-18 Volume control; 1/2 meg.; variable..	K-1092-7
R-19 I.F. filter; 50,000 ohms; 1/2 watt..	K-2226-6
R-20 Audio plate; 50,000 ohms; 1/2 watt..	K-2226-6
R-21 Audio plate filter; 25,000 ohms; 1/2 watt.....	K-2226-7
R-22 Tone control; 1/4 meg.; variable...	K-1527-1

REPLACEMENT PARTS LIST—continued

RESISTORS—continued:—		Part No.	COILS—continued:—		Part No.
R-23	Audio grid; ¼ meg.; ½ watt.	K-2226-4	L-13	First I.F. transformer primary	K-1396-1
R-24	Impedance equalizer; 10,000 ohms; ½ wats.	K-2226-10	L-14	First I.F. transformer secondary	Part of K-1394-1
R-25	Divider; 14,000 ohms ...	Tapped Resistor } K-1174	L-15	Second I.F. transformer primary ...	K-1513-1
R-26	Divider; 12,000 ohms ..		L-16	Second I.F. transformer secondary.	Part of K-1511-1
R-27	Divider; 1,000 ohms ...		L-17	Third I.F. transformer primary	K-1513-2
R-28	Divider; 50,000 ohms; ½ watt	K-2226-6	L-18	Third I.F. transformer secondary...	Part of K-1511-2
R-29	Divider; 25,000 ohms; ½ watt	K-2227-7	L-19	Voice coil and diaphragm assembly (4 ohms)	Part of K-1156-2
R-30	Divider; 30,000 ohms; 1 watt.	K-2363-3	L-20	Hum bucking coil.	K-1155-3
R-31	Main bias; 400 ohms; 1 watt.	K-2363-26	L-21	Field Coil, 1800 ohms, 6 watts.	Loud-speaker } K-1157-2
R-32	Oscillator anode filter (short wave); 35 ohms; ½ watt.	K-2363-39			
R-33	First I.F. screen; 5,000 ohms; ⅓ watt.	K-2226-12			
COILS:—			SWITCHES:—		
L-1	Antenna R.F. transformer primary	Short wave band } K-1446-1	S-1	No. 1 antenna terminal R.F. transformer primary.	K-1417
L-2	Antenna R.F. transformer secondary	Part of K-1445-1	S-2	No. 2 antenna terminal R.F. transformer primary.	
L-3	Antenna R.F. transformer primary	Broad-cast } K-1446-1	S-3	Antenna R.F. transformer secondary	
L-4	Antenna R.F. transformer secondary	Part of K-1445-1	S-4	Second R.F. transformer primary ..	
L-5	Second R.F. transformer primary	Short wave band } K-1446-2	S-5	Second R.F. broadcast transformer primary—Shorting.	
L-6	Second R.F. transformer secondary	Part of K-1445-2	S-6	Second R.F. transformer secondary	
L-7	Second R.F. transformer primary	Broad-cast } K-1446-2	S-7	Oscillator plate coil.	
L-8	Second R.F. transformer secondary	Part of K-1445-2	S-8	Oscillator broadcast plate coil—Shorting.	
L-9	Oscillator plate coil.	Short wave } K-1440	S-9	Oscillator grid coils.	
L-10	Oscillator grid coil.	Broad-cast } K-1439	S-10	A.C. power switch (part of tone control).	K-1527-1
L-11	Oscillator plate coil.		TRANSFORMERS:—		
L-12	Oscillator grid coil.		T-1	Output transformer.	K-1065-4
			T-2	Power transformer—60 cycle.	K-1249-5
				25 cycle.	K-1249-6

SOCKET VOLTAGE AND CURRENT READINGS

The following readings were taken on a standard production Model 62 chassis using a Weston type 566 analyzer modified for use with the type 666-1A adapter.

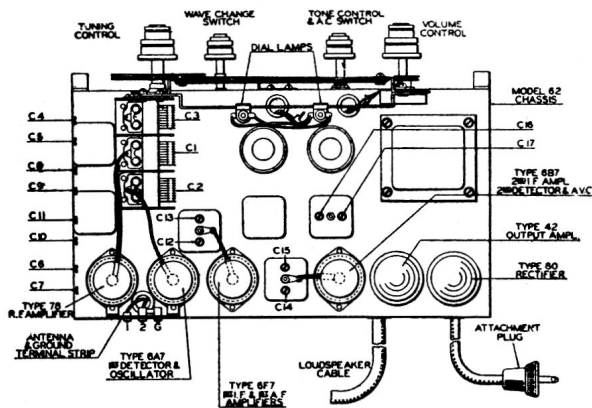
Tube	Position	Heater Volts	Plate Volts	Screen Volts	Cathode Volts (to heater)	Plate Current	
						Normal Bias	Red. Bias (4.5 volts)
78	R.F. Amp.	6.8	245	100	3.8	6.0	9.0
6A7	1st Det. Osc.	6.8	235 (a) 165 (b)	75.0	4.0	2.5	5.0
6F7	1st I.F. & 1st A.F.	6.8	245 (c) 105 (d)	70.0	7.0	2.5 (f) 1.0 (g)	2.5(f) 1.5(g-h)
6B7	2nd I.F.; A.V.C.; 2nd Det.	6.8	250 4.5 (i) 85.0 (j)	105	14.0	9.5	10.5
42	Output	6.8	280	295	1.2 (grid)	24.0	28.0
80	Rectifier	5.2	420 D.C. Either Plate A.C. volts 550 (fil. to plate)			30.0 each plate	

Line voltage 120/118.

- (a). I.F. plate.
- (b). Oscillator anode.
- (c). A.F. plate (No. 2 on analyzer adapter).
- (d). I.F. plate (No. 4 on analyzer adapter).
- (e). A.F. grid.

- (f). I.F. current; no change.
- (g). Audio current.
- (h). Reading to cathode.
- (i). No. 2—Diode plate.
- (j). No. 1—Diode plate.

MODELS 62-62A, 63-63A RADIO RECEIVERS



Chassis layout showing realigning positions.

REALIGNING DETAILS:—

1. I.F. ADJUSTMENTS:—

- (a) Set signal generator to 462.5 K.C. and connect to control grid terminal of first detector tube.
- (b) Align C-12, C-13, C-14, C-15, C-16 and C-17.
- (c) Repeat second time for close adjustment.

2. BROADCAST BAND—.53 to 1.6 MEGACYCLES:—

- (a) Set signal generator to 1400 K.C. and connect to antenna terminal No. 1 on receiver, strapping 2 and 3 to ground.
- (b) Place receiver wave change switch on "broadcast band" position and set dial pointer to 1.4 megacycles (1400 K.C.).
- (c) Align C-9, adjust to highest frequency peak with trimmer farthest out.
- (d) Set signal generator to 600 K.C. and connect to antenna terminal No. 1.

- (e) Set receiver dial pointer to .6 meg. (600 K.C.).
- (f) Align C-10.
- (g) Recheck C-9 as in A, B and C of No. 2.

3. SHORT WAVE BAND—5.6 to 15.4 MEGACYCLES:—

- (a) Set signal generator to 14 meg. and connect to antenna terminal No. 1 on receiver with No. 2 and No. 3 strapped.
- (b) Set receiver dial pointer to 14 meg.
- (c) Align C-8.
- (d) Align C-4 and C-6. C-54 and C-55 should also be adjusted at this point.
- (e) Set signal generator to 6 meg.
- (f) Align C-11. Vary pointer within half a channel on either side; at the same time adjust trimmer so that correct tune obtained.
- (g) Recheck C-8 as in A, B and C above.

NOTE:—On some models it will be found that the required capacitance for C-54 and C-55 is obtained from twisted busbar in spaghetti mounted on switch and that no capacitors have been fitted.

NOTE:—After variation of C-54 and C-55 the metal base plate should be replaced and realigning made on C-4 and C-6. If much variation has been required, it will probably be necessary to recheck the trimmers C-8 and C-6.

NOTE:—Some models of the 62 and 63 series have been brought out with a dial scale coloring of green for standard broadcast and red for short wave. Another series of the same model employs a buff coloring for the broadcast band and a green color for the short-wave band. In either case the figures on each band for both series are the same. These have been used as the tuning range indications in these realigning instructions in preference to mention of the band coloring.