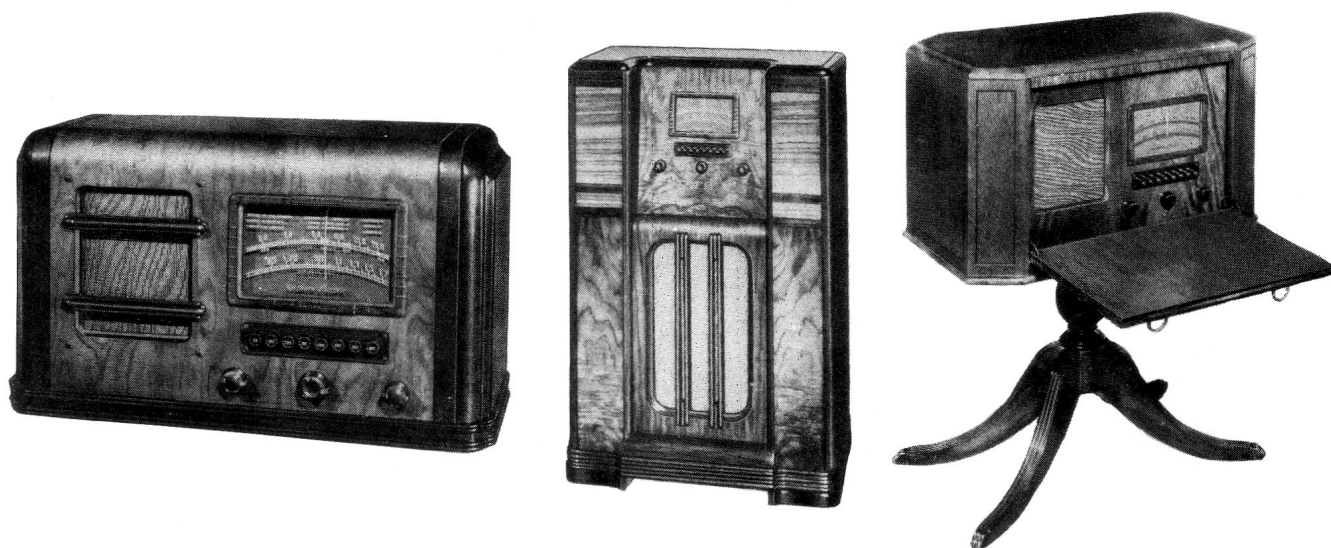


Models 742A - 743A - 745A

Radio Receivers



Specifications

Frequency Range:

Broadcast—535 to 1715 K.C.
Shortwave—5.7 to 15.6 M.C.

I.F.:

470 kilocycles

Tubes:

Type	Position
6SA7	First Detector
6SK7	Int. Freq. Amp.
6H6	2nd Det. & A.V.C.
6SQ7	1st Audio Amp.
6F6G	Power Output
6J5	Oscillator
5Y4G	Rectifier

Power Supply:

105-125 Volt A.C., 25-60 cycles.
Consumption:—58 watts.

A.V.C.:

On 6SA7 First Det. and 6SK7 I-F Amplifier.

Controls:

Three (not including push buttons)
(1) Tuning; (2) Volume; (3) Tone; A-C
Switch on Vol. Control.

Power Output:

2.5 watts.

No. Bands:

Two

Push Buttons:

Eight, providing six auto. tuned stations with
7 & 8 buttons used for switching S.W. and
Bdct. (capacitor type dual.)

Loudspeakers:

742A: 5"; 743A-745A: 8".

Cabinets:

742A—Mantel
743A—Console
745A—"Duncan Phyffe" period.

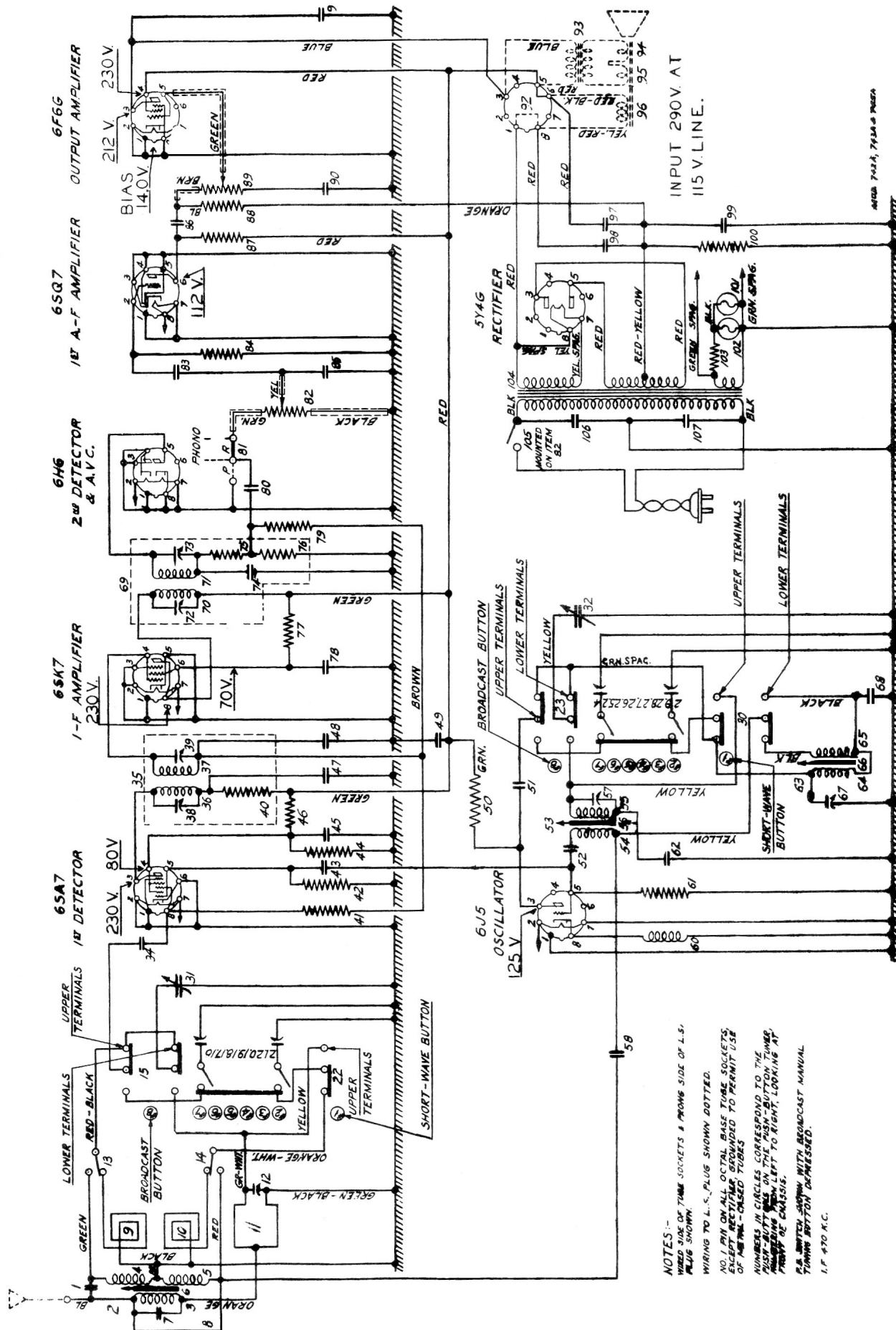
Audio:

First A.F. portion 6SQ7 resistance-capaci-
tance coupled to 6F6G output.

Dimensions:

Chassis:—12-1/8" x 6-1/2" x 3-5/32".
Cabinets: 742A: 11" x 10-1/8" x 8-3/8"
743A: 39" x 12-3/8"
745A: 31" x 23" x 14".

MODELS 742A-743A-745A RADIO RECEIVERS



NOTES:-
WIRE SIDE OF TUBE SOCKETS & PLUG SIDE OF L.S. PLUG SHOWN.
WIRING TO L.S. PLUG SHOWN DOTTED.
NO 1 PIN ON ALL OCTAL BASE TUBE SOCKETS EXCEPT RECTIFIER, BECAUSE TO PERMIT USE OF METAL-CASED TUBES.
NUMBERS IN CIRCLES CORRESPOND TO THE PUSH-BUTTONS ON THE PUSH-BUTTON TUNING INDICATOR, FROM LEFT TO RIGHT, LOOKING AT FRONT OF CHASSIS.
P.B. SWITCH SHOWN WITH BROADCAST MANUAL TUNING BUTTON DEPRESSED.
I.F. 470 K.C.

MODELS 742A-743A-745A RADIO RECEIVERS

REPLACEMENT PARTS

Item	Description	Part No.	Item	Description	Part No.
1	Capacitor(wire formed)5 mmf.Part	K-4684	86	Capacitor .02 mf. 400 V.	K-2228-7
2-6	Ant.Trans.Assembly	K-4684	87	Resistor 1/4 meg. 1/2 Watt	K-2226-4
7	Capacitor 100 mmf. mica	K-1611-2	88	Resistor 1/4 meg. 1/2 Watt	K-2226-4
8	Capacitor 5 mmf.(wire formed)Part	K-4684	89	Tone Control 1/4 meg.	K-4612-3
9	Loop Ant.Manual:Model 742A-743A	K-5095-1	90	Capacitor .002 mf. 400 Volt	K-2228-2
9A	Loop Ant.Manual:Model 745A	K-5095-2	91	Capacitor .003 mf. 400 Volt	K-2228-3
10	Loop Ant.P.B.:Model 742A-743A	K-5160-1	92	Loudspeaker Plug	K-2678
10A	Loop Ant.P.B.:Model 745A	K-5160-2	93	Output Trans.Model 742A	K-3873-3
11	Loop Ant.S.W.:Model 742A-743A	K-5131-1	93A	Output Trans.Model 743A	K-2718-11
11A	Loop Ant.S.W.:Model 745A	K-5163-2	93B	Output Trans.Model 745A	K-2718-14
12	Trimmer 3-25 mmf.	K-1458-6	94	V.C.& Diaphragm Mod.742A	K-4593
13-14	Loop Switch	K-4029-2	94A	V.C.& Diaphragm Mod.743A	K-3493-1
15	Broadcast-Manual Sw. (R.F.)		94B	V.C.& Diaphragm Mod.745A	K-5058
16-21	Auto P.B.Sw. (R.F.)		95	See item 96	
22	S.W.Manual Switch (R.F.)		96	Field & Hum Coil Mod.742A Not Replaceable	
23	Broadcast-Manual Sw.(Osc.)	K-4450-3	96A	Field & Hum Coil Mod.743A	K-3378-4
24-29	Auto P.B. Switch (Osc.)		96B	Field & Hum Coil Mod.745A Not Replaceable	
30	S.W. Manual Switch (Osc.)		97-98	Filter Cap.20 mf/450 V.ea.}	K-4470
31	Gang: R-F Tuning - 530 mmf. }		99	Filter Cap.20 mf/25 V. }	
32	Gang: Osc.Tuning - 530 mmf. }	K-4439-3	100	Resistor 250 ohm 1 Watt	K-1870-25
34	Capacitor 1000 mmf. mica	K-1611-23	101-102	Dial Lamps	K-2589-3
35	1st I-F Trans. Assembly	K-4609-2	103	Resistor 1.3 ohms	K-2252-17
36-37	1st I-F Coil; Primary & Sec.	K-4610	104	Power Transformer 25-60 cy.	K-3700-12
38-39	1st I-F Trimmers; P. & S.	K-2134-6	105	A.C. Switch	Part of K-4663-2
40	Resistor: 1000 ohms 1/2 Watt	K-2226-16	106-107	Line Filter .025 mf. 500 V.	K-5073
41	Resistor 2 meg. - 1/2 Watt	K-2226-1			
42	Resistor 20,000 ohm 1/2 Watt	K-2226-8			
43	Capacitor 100 mmf. mica	K-1611-2			
44	Resistor 30,000 ohm 1/2 Watt	K-2226-44			
45	Capacitor .1 mf. 200 volt	K-2227-9			
46	Resistor 12,5000 ohm 1 watt	K-1870-28			
47	Capacitor .05 mf. 400 volt	K-2228-8			
48	Capacitor .05 mf. 200 volt	K-2227-8			
49	Capacitor .1 mf. 400 volt	K-2228-9			
50	Resistor 20,000 ohms 1/2 Watt	K-2226-8			
51	Capacitor 500 mmf. mica	K-1611-7			
52	Capacitor 100 mmf. mica	K-1611-2			
53-56	S.W.-man.osc. assembly	K-5077			
57	Trimmer 3-25 mmf.	K-1458-6			
58	Capacitor 5 mmf. mica	K-4235-1			
59	R-F Choke	K-3935-2			
61	Resistor 50,000 ohm 1/2 Watt	K-2226-6			
62	Capacitor 3,100 mmf. mica	K-1952-23			
63-66	Bdct.Oscillator Assembly	K-5075			
67	Trimmer 3-25 mmf.	K-1458-6			
68	Capacitor 50 mmf. mica	K-1611-1			
69	2nd I-F Transformer Assembly	K-4545-2			
70-71	2nd I-F Trans. Coil: P. & S.	K-4585			
72-73	2nd I-F Trimmers: P. & S.	K-2932-1			
74	Cap. 100 mmf. mica - Part of	K-2932-1			
75	Resistor 50,000 ohms 1/2 Watt	K-2226-6			
76	Resistor 1/2 meg. 1/2 Watt	K-2226-3			
77	Resistor 65,000 ohms 1/2 Watt	K-2226-52			
78	Capacitor .1 mf. 400 volt	K-2228-9			
79	Resistor 2.0 meg. 1/2 watt	K-2226-1			
80	Capacitor .02 mf. 200 volt	K-2227-7			
81	Phono-Radio Connector	K-3291-1			
82	Volume Control 2.0 meg.	K-4663-2			
83	Capacitor .02 mf. 200 volt	K-2227-7			
84	Resistor 10 meg. 1/2 watt	K-2226-74			
85	Capacitor 100 mmf. mica	K-1611-2			

MISCELLANEOUS:

Loudspeaker less O.T. - 742A	K-4592-2
Loudspeaker less O.T. - 743A	K-3482-4
Loudspeaker less O.T. - 745A	K-5057
Phono-Radio Term. Strip	K-2456-2
Sockets (Tube)	K-4944
Socket (Filter Cap)	K-4509-2
Dial Lamp Sockets	K-2835-2
Dial Frame	K-5028
Dial Wheel	K-4486-2
Dial Cable (40")(Order by feet)	K-4636
Dial Cable Springs	K-4487
Set Screws for dial wheel	K-2648-3
Dial Pointer	K-4906-1
Dial Scale	K-5030
Dial Escutcheon	K-5033-2
P.B. Escutcheon	K-4646
P.B. Knobs	K-4365-1
"Tuning" Knob	K-3961-2
"Volume" Knob 742A	K-2765-2
"Fidelity" Knob 742A	K-2765-10
Two Contact Terminal Strips	K-1683-1
5 & 1 Terminal Strip	K-3110
A & G Terminal Strip 742A-743A	K-3749-1
Rear Cover (Fibre)(Complete) 742A	K-5124
Bdct. Loop Ant. only model 745A	K-5095-2
A & G Terminal Strip with Sw. (745A)	K-5133
Instruction Folder English	K-5038
Station Names	K-4649
"Volume" Knob (743A-745A)	K-3961-3
"Tone" Knob (743A-745A)	K-3961-7
Escutcheon Mounting Screws	K-3746-2
Felt Washers	K-2491-3
Chassis Mounting Screws	K-1033-8

REALIGNING DETAILS

I-F REALIGNMENT:

With .1 mf. capacitor in generator lead, set to 470 k.c.; connect input to 1st detector grid and adjust I-F trimmers, items 38, 39, 72 and 73 (all four trimmers are located on top of two I-F cans at rear edge of chassis).

R-F BROADCAST-MANUAL:

(With chassis clear of cabinet and loops disconnected) Close gang; dial pointer should meet above line etched on to extreme left of dial frame. Locate loop leads and join green and red-black together; tie orange and black together; tie red and orange-white. Attach trimmer (K-1458-5 or equivalent), adjusted to approximately 5 mmf. from green and red-black junction, to ground. Connect shield of generator to orange and black junction and the generator main lead to blue. Set generator and dial to 535 k.c. Press in "B.C." Push Button. Adjust iron core, item 66 for maximum peak. Set generator and dial to 600 k.c. (third etched line from left on dial frame). Adjust iron core item 6 for maximum peak. Set generator and dial to 1600 k.c. (second last etched line from right on dial frame). Adjust trimmer, item 67, for maximum peak. Recheck antenna item 6, at 600 k.c.

R-F SHORT WAVE:

Attach generator to grid first detector at gang (See that S.W. button is pushed in) through .1 mf. capacitor. Set generator and dial to 6.0 m.c. (Second etched line from left on dial frame). Adjust iron core item 56 for maximum peak. Set generator and dial to 15.0 m.c. (last etched line on dial frame to right). Adjust trimmer item 57 for maximum peak. Recheck at 6.0 mc.

FINAL ADJUSTMENTS WITH CHASSIS IN CABINET:-

R-F BROADCAST-MANUAL:

Return chassis to cabinet and attach all loop leads. Bring yellow-red single loop lead at present fastened to a rivet holding the broadcast loop to the back cover, out from back. Place loop in normal position against cabinet back, and loop switch in "loop" position. Generator leads should remain disconnected from set but with enough input to radiate into loop. Generator should be at or near 600 k.c. but not on a station. Touch end of this yellow-red wire to rivets on back of cover in clockwise direction starting from bottom left rivet until output passes through "peak". When point of maximum output is reached, solder this lead to busbar loop which circles main loop on inner side of cover.

R-F SHORT WAVE:

Attach generator leads through 400 ohm carbon resistor to Antenna Terminal. Set generator and dial to 15.0 m.c. Adjust trimmer item 12 (located at top left-hand corner of cabinet) while rocking gang for maximum peak. Check at 6.0 m.c. for sensitivity.

P.B. ADJUSTMENT FOR LOOP OR EXTERNAL ANTENNA:-

EXTERNAL ANTENNA:

With chassis in cabinet and all leads connected, push loop switch to "External" position. Align large screw for maximum output, (after choice of station and button corresponding to that station frequency) then adjust small screw alongside of it until maximum peak is obtained.

LOOP: Push loop switch to "LOOP" position. Align large and small screw as for "External" loop above. Rotate cabinet for location which will give maximum signal.

D.C. RESISTANCE OF COILS (OHMS)

<u>Item</u>	<u>Description</u>	<u>Resistance</u>	<u>Item</u>	<u>Description</u>	<u>Resistance</u>
3	Ant.Coil Primary	14.0	94	Voice Coil (& diaphragm)Mod.742A	3.0
4-5	Ant.Coil Secondary (each)	2.5	94A	Voice Coil (& diaphragm)Mod.743A	1.5
36	1st I-F Primary	16.0	94B	Voice Coil (& diaphragm)Mod.745A	5.0
37	1st I-F Secondary	11.5	-	Output Trans. Secondary Mod. 742A-743A & Model 745	Below 0.5
54	Manual Oscillator grid	3.5	-	Humbuck coils Models 742A-743A-745A	Below 0.5
55	Manual Oscillator plate	0.5	96	Field coils - Models 742A-743A-745A	1000.0
60	R-F Choke	Below 0.5	104	Power Transformer Primary	12.5
64	S.W.Oscillator Grid	Below 0.5	-	Power Transformer H.T. Filament	Below 0.5
66	S.W.Oscillator Plate	Below 0.5	-	Power Transformer H.T.Secondary	700.0
70	2nd I-F Primary	16.0	-	Power Transformer Heaters	Below 0.5
71	2nd I-F Secondary	16.0			
93	Output Trans.Primary Model 742A	625.0			
93A	Output Trans.Primary Model 743A	225.0			
95B	Output Trans.Primary Model 745A	225.0			