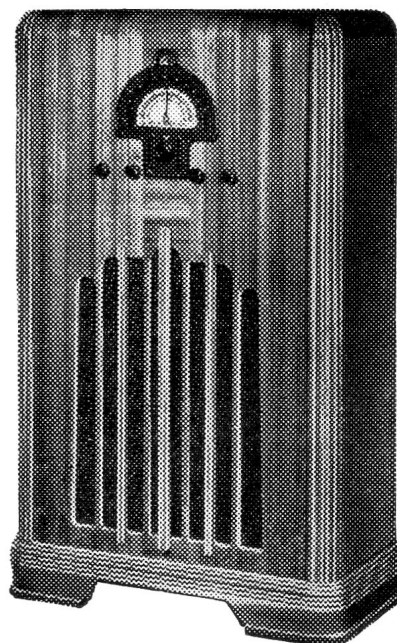
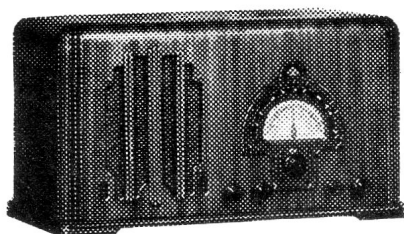


Models 722, 722A, 723, 723A

Radio Receivers



Specifications

Frequency Range:

Broadcast, Blue: 535 to 1720 K.C.
Short Wave, Red: 9.3 to 15.5 megacycles.
Short Wave, Green: 5.75 to 10.15 megacycles.

I.F.:

470 K.C.

Tubes:

Type	Function
6A8G	Converter
6K7	I.F. Amplifier
6H6	2nd Detector, A.V.C.
6F5	1st A.F. Amplifier
6Y6G	Output Amplifier
5Y4G	Rectifier
45	Voltage stabilizer

Power Supply:

Models 722, 723: 105 to 125 volts A.C.
60 cycles.
Models 722A, 723A: 105 to 125 volts A.C.
25-60 cycles.

A.V.C.:

A.V.C. delay bias is applied to the cathode of the type 6H6, and also to the grid of the type 6F5. A.V.C. control on tubes type 6A8 and 6K7.

Controls:

Left to Right—Power switch; tone control; tuning control; wave change switch; volume control. A vernier tuning drive used, also a station selector system employing ten preset stops. A tuning lamp is mounted above the dial, maximum dimming indicating precise tuning.

Loudspeakers:

Models 722, 722A: Eight inch electrodynamic.
Models 723, 723A—Ten inch electrodynamic enclosed in a "Mirrophonic Tone Chamber".

Cabinets:

Models 722, 722A—Table model.
Models 723, 723A—Console models.

Schematic Circuit Diagram—Models 722-723.

REPLACEMENT PARTS LIST

Item	Description	Part Number
1	Bdct. Ant. (Blue) Trans., Pri.	K-3460
2	Bdct. Ant. (Blue) Trans. Sec.,	
3	6 mmf. Coupling Capacitor..	
4	Capacitor, 50 mmf. mica....	K-1611-1
5	S-W (Green) Ant. Trans., Pri.	K-3462
6	S-W (Green) Ant. Trans., Sec.	
7	S-W Section Ant. Tuning.	
	Cap., 80.4 mmf. max.....	K-3470
8	Bdct. Section Ant. Tuning	
	Cap., 402 mmf. max.....	
9	S-W Section Osc. Tuning Cap.	K-3470
	80.4 mmf. max.....	
10	Bdct. Section Osc. Tuning	
	Cap., 402 mmf. max.....	K-1458-5
11	1.5-10 mmf. Trimmer Cap....	
12	3-25 mmf. Trimmer Cap....	
13	S-W (Red) Ant. Trans., Pri..	K-3464
14	S-W (Red) Ant. Trans., Sec.	
15	3-25 mmf. Trimmer Cap....	
16	Capacitor, 0.05 mf, 175 V...	K-2227-8
17	W-C Switch, Ant. Section...	K-3474
18	W-C Switch, Osc. Section...	
19	W-C Switch, Shorting Section	
20	Capacitor, 300 mmf. mica....	K-1611-4
21	Capacitor, 80-250 mmf. lag	K-3083-4
22	Bdct. (Blue) Osc. Coil.....	K-3461
23	3-25 mmf. Trimmer Cap....	K-1458-6
24	S-W (Green) Osc. Trans., Pri.	K-3463
25	S-W (Green) Osc. Trans., Sec.	
26	3-25 mmf. Trimmer Cap....	
27	Capacitor, 2040 mmf, mica	K-1952-20
	± 3%.....	
28	S-W (Red) Osc. Trans., Pri..	
29	S-W (Red) Osc. Trans., Sec..	K-3465
30	3-25 mmf. Trimmer Cap....	K-1458-6
31	Capacitor, 1460 mmf, mica	K-1952-21
	± 3%.....	
32	Capacitor, .005 mf, 175 V...	
33	Resistor, 5,000 ohms.....	K-2226-12
34	Resistor, 50,000 ohms.....	K-2226-6
35	Capacitor, 100 mmf, mica....	K-1611-2
36	Resistor, 2 megohms.....	K-2226-1
37	Resistor, 2 megohms.....	K-2226-1
38	1st I-F Trans. Assem.....	K-3513
39	Capacitor, 98 mmf, mica....	—
40	Capacitor, 108 mmf, mica....	—
41	1st I-F Trans., Pri.....	—
42	1st I-F Trans., Sec.....	—
43	Capacitor, 0.05 mf, 175 V...	K-2227-8
44	Phono Connecting Strips....	K-2986
45	Resistor, ½ megohm.....	K-2226-3
46	Resistor, 1/10 megohm.....	K-2226-5
47	2nd I-F Trans. Assem.....	K-3514
48	Capacitor, 100 mmf, mica....	K-1611-2
49	Resistor, 50,000 ohms.....	K-2226-6
50	Capacitor, 98 mmf, mica....	—
51	Capacitor, 98 mmf, mica....	—
52	2nd I-F Trans., Pri.....	—
53	2nd I-F Trans., Sec.....	—

Item	Description	Part Number
54	½ meg. Vol. Control.....	K-3472
55	Capacitor, .01 mf, 175 V....	K-2227-6
56	Resistor, 2 megohm.....	K-2226-1
57	Capacitor, 100 mmf, mica...	K-1611-2
58	Elec. Capacitor, 5 mf, 5 volts	K-3603
59	Resistor, 4,000 ohms.....	K-2363-35
60	Capacitor, 0.1 mf, 175 V....	K-2227-9
61	Resistor, 5,000 ohm.....	K-3315-17
62	Capacitor, 0.1 mf, 350 V....	K-2228-9
63	Tuning, Lamp, 24 V.....	K-2643
64	Resistor, 10,000 ohms.....	K-2363-21
65	Resistor, 10,000 ohms.....	K-2226-10
66	Resistor, ¼ megohm.....	K-2226-4
67	Capacitor, 0.02 mf, 175 V...	K-2227-7
68	Resistor, ¼ megohm.....	K-2226-4
69	Resistor, 1/10 megohm.....	K-2226-5
70	Capacitor, 0.25 mf, 175 V...	K-2227-10
71	¼ meg. Tone Control.....	K-3473
72	Capacitor, .001 mf, 350 V...	K-2228-1
73	Resistor, 50,000 ohms.....	K-2226-6
74	Capacitor, .003 mf, 350 V...	K-2228-3
75	Loudspeaker Plug.....	K-2678
76	Loudspeaker Cable.....	—
77	Output Trans. Assem.....	K-2718-8
78	Voice Coil and Diaphragm	K-3483
	(Model 722).....	
78a	Voice Coil and Diaphragm	K-3138
	(Model 723).....	
79	Hum Bucking Coil (Model	—
	722).....	
79a	Hum Bucking Coil (Model	—
	723).....	
80	Field Coil (Model 722).....	K-3378-2
80a	Field Coil (Model 723).....	K-2543-5
81	Elec. Cap., 12 mf, 135 V....	K-3471
82	Elec. Cap., 8 mf, 240 V....	
83	Elec. Cap., 8 mf, 110 V....	
84	Resistor, 50,000 ohms.....	K-2226-6
85	Resistor, 6,600 ohms.....	K-2226-65
86	Resistor, 6,600 ohms.....	K-2226-65
87	Resistor, 500 ohms.....	K-2226-18
88	Resistor, ½ megohm.....	K-2226-3
89	Capacitor, 0.25 mf, 350 V...	K-2228-10
90	Resistor, 10 ohm.....	K-2226-61
91	Resistor, 10 ohm.....	K-2226-61
92	Dial Lamp, 6.3 V.....	K-2589-3
93		
94	Power Transformer—60 cycle	K-3500-1
	Power Transformer—25 cycle	K-3500-2
95	A.C. Switch.....	K-3475
96	Capacitor, 0.025 mf, 520 V.,	K-1750
	a.c.....	
97	Capacitor, 0.025 mf, 520 V.,	
	a.c.....	
98	Capacitor, .1 mf, 175 V....	K-2227-9
99	Elec. Capacitor, 16 mf, 240 V.	K-3655
100	Resistance Wire, 1.6 ohm	K-3436-26
	(10¼" long).....	

REPLACEMENT PARTS LIST—(Continued)

Description	Part Number
Tube Sockets.....	K-1924-1
Ant. & Phono Terminal Strip....	K-2986
Socket (four prong).....	K-1194-1
Reduction Drive.....	K-3556
Detent Arm & Bushing Assy.....	K-3542
Indicator Scale.....	K-3555
Dial Lamp Socket.....	K-3340
Pointer Assy.....	K-3536
Dial Scale (Dialophane).....	K-3553
Tuning Lamp Socket.....	K-3123
Plunger & Stop Assembly.....	K-3521
Spring for Plunger.....	K-3532
Pointer Mounting Screw (No. 4-40 x 3/16 RHM).....	K-1203-1
Escutcheon Assy. Complete.....	K-3559
Wrench (for automatic-tuning adjusting).....	K-3567
Insulation Strip (2 plus 1).....	K-1683-1
Insulation Strip (5 plus 1 out-board).....	K-3110

Description	Part Number
No. 8 Auto Washer (Tone Chamber).....	K-3353-2
Tone Chamber Mounting Screw....	K-3354-12
Chassis Mounting Nols.....	K-3516
Knob—"Large Tuning".....	K-3356-1
Knob—"Small Tuning".....	K-2830-5
Knob—"On-Off".....	K-2765-7
Knob—"Tone".....	K-2765-8
Knob—"Volume".....	K-2765-3
Knob—"Band".....	K-3609
Felt Washers (under large knob).....	K-2491-1
Felt Washer (under small knob).....	K-2491-4
Station Call Letter Cards.....	K-3597
Cover for A.C. Switch.....	K-3143
Loudspeaker Mounting Screw (3 required)—Model 722.....	K-2971-2
Loudspeaker Mounting Screw (1 required)—Model 723.....	K-2971-1
Tuning Wrenches (all models)...	K-836
Drive disc.....	K-3180-2
Dial cover.....	K-3515

REALIGNING INSTRUCTIONS

I.F. ALIGNMENT

- Set the signal generator at 470 k.c. and connect its output through a 0.1 mf. capacitor to the grid cap of the first detector, type 6A8 tube. Set the receiver dial to about 600 k.c. and turn the wave-change switch to the broadcast position.
- Adjust screws 41, 42, 52, 53 (movable cores, as shown on the schematic) for maximum output.
- Reduce the output from the generator to as low a value as will give an output reading and check the adjustments, all of which should peak properly.

R.F. ALIGNMENT—(See Underside Aligning Positions).

- With the gang all in, check the position of the pointer. It should line up with the end of the scale. Put 100 mmf. dummy antenna in generator lead and set wave-change switch to broadcast position.
- Set generator and receiver to 1600 k.c. Adjust 23 to tune in the signal, and adjust 11 for maximum output.
- Set the generator and the pointer to 600 k.c. and adjust lag capacitor, item 21, for maximum output. Then adjust movable iron core in the

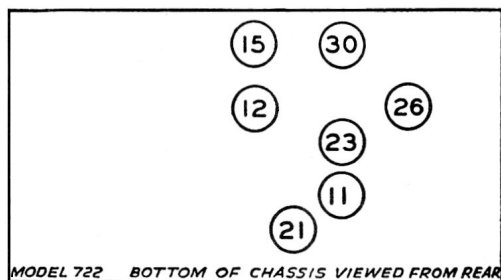
antenna secondary, item 2, for maximum output while rocking the gang. Recheck at 1600 k.c. and again at 600 k.c., if necessary.

GREEN BAND:

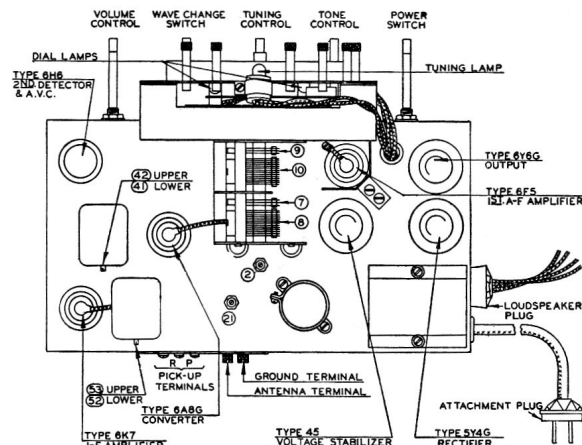
- Substitute a 400 ohm carbon resistor in place of the capacitor in the lead from the signal generator. Turn the wave-change switch to the green band position.
 - Set the receiver and generator to 10 megacycles. Adjust 26 to tune in the signal and adjust 12 for maximum output, while rocking the gang.
- (NOTE:—Check for image at 10.9 megacycles)

RED BAND:

- Use a 400 ohm carbon resistor in the lead from the generator to the receiver. Turn the wave change switch to the red band position.
- Set the generator and receiver to 15 megacycles. Adjust 30 to tune in the signal and adjust 15 for maximum output while rocking the gang. (Check for the image at 15.9 mc.)



Underside Aligning Positions.



Model 722-723—Chassis Layout showing Upper Aligning Points and Tube Positions.

SOCKET VOLTAGE READINGS

TUBE	VOLTAGES					CURRENTS—M.A.		
						Screen	PLATE	
	Heater A-C	Screen	Plate	Cathode	Grid		Normal Bias	Bias red. 4½ V.
Type 6A8 Converter	6.3	50	129①	0	−1.0③	3.1	2.6②	3.8
Type 6K7 I-F Amplifier	6.3	50	129	0	−1.0③	0.7	2.8	3.8
Type 6H6 2nd Det. & A.V.C.	6.3	—	—	0⑥	—	—	—	—
Type 6F5 1st A-F Amplifier	6.3	—	65	0	−1.0③	—	0.2	0.35
Type 6Y6G Output Amplifier	6.3	138	132	0	−14.5④	4.0	52	63
Type 45 Voltage Stabilizer	2.45	—	138	—	−27⑤	—	11	16.5
Type 5Y4G Rectifier	5.05	—	—	138	—	Plate 43	43	—

① Anode Grid Voltage 108.

② Anode Grid Current 2.2 ma.

③ Measured across resistor 87.

④ Measured across resistors 86 and 87.

⑤ Measured across resistors 85, 86 and 87.

⑥ Cathode No. 1, −1.0 volt, measured across resistor 87.

SOCKET RESISTANCE READINGS TO GROUND - OHMS

TUBE	TOP CAP (Cont. Grid)	PIN No. 1 (Shell)	PIN No. 2 (Heater)	PIN No. 3 (Plate)	PIN No. 4 (Screen)	PIN No. 5	PIN No. 6	PIN No. 7 (Heater)	PIN No. 8 (Cathode)
Type 6A8	4.6 meg.	0	Approx. 5	9000	4000	(Grid No. 1) 50,000	(Grid No. 2) 24,700	Approx. 5	0
Type 6K7	0.6 meg.	0	Approx. 5	9000	4000	(Sup- pressor) 0	—	Approx. 5	0
Type 6H6	—	0	Approx. 5	2.7 meg.	(Cathode) 114,000	(Plate) 0	—	Approx. 5	0
Type 6F5	2.1 meg.	0	Approx. 5	—	(Plate) 2.51 meg.	—	—	Approx. 5	0
Type 6Y6G	—	0	Approx. 5	9800	9700	407,000	—	Approx. 5	0
Type 45	—	(Filament) 10	(Plate) 9700	(Grid) 514,000	(Filament) 10	—	—	—	—
Type 5Y4G	—	—	—	64,000	—	(Plate) 64,000	—	9700	9700

These readings were taken with the power off and tone control in treble position. The pins are numbered to correspond with the schematic circuit diagram.