



## ALIGNMENT PROCEDURE

**RADIO CONTROLS**—Set volume control to maximum. Set tuning control and band switch as indicated in chart.

**OUTPUT METER**—Connect across voice-coil terminals.

**SIGNAL GENERATOR**—Connect generator and set frequency as indicated in chart. Use modulated output.  
**OUTPUT LEVEL**—During alignment, adjust signal-generator output to hold output-meter reading below 1.25 volts.

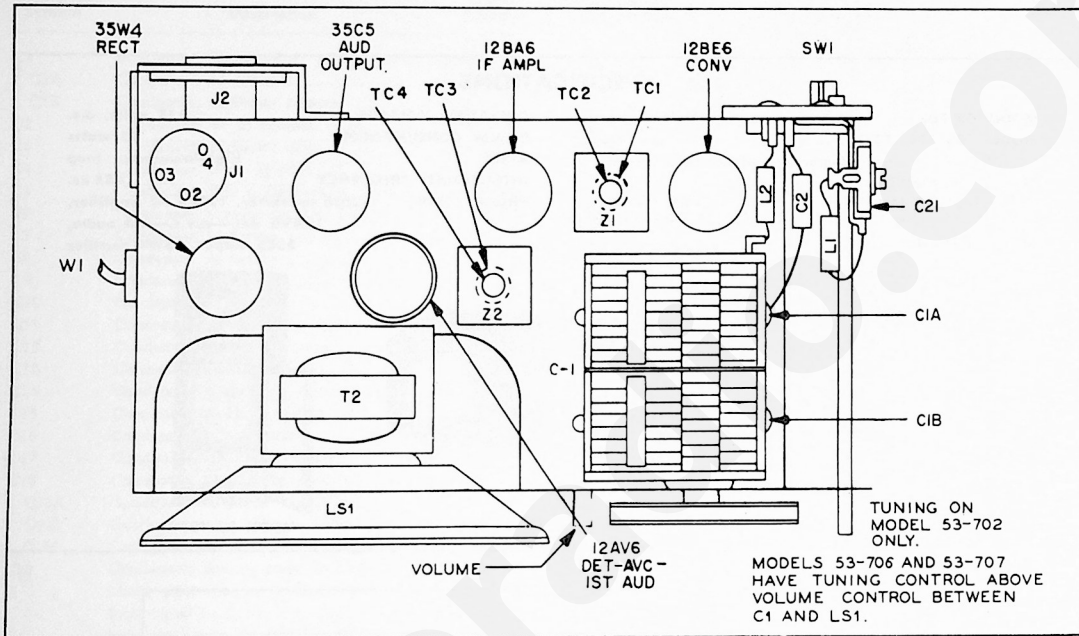


Figure 2. Top View, Showing Trimmer Locations

TP2-2278

## ALIGNMENT CHART

STEP	SIGNAL GENERATOR		RADIO			ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	BAND SWITCH SETTING	SPECIAL INSTRUCTIONS	
1	Ground lead to B-; output lead through a .1- $\mu$ f. condenser to grid (pin 7) of 12BE6.	455 kc.	Tuning gang fully open	Broadcast	Adjust tuning cores, in order given, for maximum output. (TC1 and TC4 are located at top of transformers.)	TC4—2nd i-f sec. TC3—2nd i-f pri. TC2—1st i-f sec. TC1—1st i-f pri.
2	Radiating loop (See note below).	1620 kc.	*1620 kc.	Broadcast	Adjust trimmer for maximum output.	C1-B—osc.
3	Same as step 2.	1500 kc.	1500 kc.	Broadcast	Adjust trimmer for maximum output.	C1-A—aerial (broadcast)
4	Same as step 2.	3200 kc.	3200 kc.	Special Services	Adjust trimmer for maximum output.	C21—aerial (special services)

**NOTE:** Make up a 6–8 turn, 6-inch-diameter loop from insulated wire; connect to signal-generator leads, and place near radio loop.

\*For proper adjustment of the oscillator trimmer, fully open the tuning gang and insert a .006-inch, non-metallic shim between the heel of the rotor and the top of the stator plates. Close the tuning gang sufficiently to hold the shim in place, and then remove the shim without disturbing the gang setting.



## REPLACEMENT PARTS LIST

NOTE: Part numbers identified by an asterisk (\*) are general replacement items. These numbers may not be identical with those on factory parts. Also, the electrical values of some replacement items may differ from the values indicated in the schematic diagram and parts list. The values substituted in any case are so chosen that the operation will be unchanged. When ordering replacements, use only the "Service Part No."

Reference Symbol	Description	Service Part No.
CI	Condenser, tuning gang	31-2751-14
C1A	Condenser, r-f trimmer	Part of C1
C1B	Condenser, oscillator trimmer	Part of C1
C2	Condenser, aerial series tracker, 944 $\mu\mu\text{f.}$	30-1220-65
C3	Condenser, oscillator grid, 47 $\mu\mu\text{f.}$	30-1230-4
C4	Condenser, a-v-c by-pass, .05 $\mu\text{f.}$	30-4650-45*
C5	Condenser, drift compensation, 7.5 $\mu\mu\text{f.}$	30-1224-83
C6	Condenser, screen by-pass, .05 $\mu\text{f.}$	30-4650-45*
C7	Condenser, i-f tuning	Part of Z1
C8	Condenser, i-f tuning	Part of Z1
C9	Condenser, i-f tuning	Part of Z2
C10	Condenser, i-f tuning	Part of Z2
C11	Condenser, detector filtering	Part of Z2
C12	Condenser, detector filtering	Part of Z2
C13	Condenser, audio coupling, .005 $\mu\text{f.}$	30-1238-1*
C14	Condenser, plate by-pass	Part of PC1
C15	Condenser, audio coupling, .005 $\mu\text{f.}$	Part of PC1
C16	Condenser, compensating	Part of PC1
C17	Condenser, tone compensation, .022 $\mu\text{f.}$	30-4650-43*
C18	Condenser, electrolytic, 3-section	
C18A	Condenser, filter, 30 $\mu\text{f.}$ , 150v.	Part of C18
C18B	Condenser, filter, 25 $\mu\text{f.}$ , 150v.	Part of C18
C18C	Condenser, filter, 20 $\mu\text{f.}$ , 150v.	Part of C18
C19	Condenser, line by-pass, .047 $\mu\text{f.}$	30-4650-45*
C20	Condenser, B minus to chassis, .1 $\mu\text{f.}$	30-4650-47*
C21	Condenser, trimmer, special services	31-6473-29
C22	Condenser, a-v-c decoupling, 220 $\mu\mu\text{f.}$	62-122001001*
I1	Lamp, pilot	34-2068
J1	Jack, clock	27-6273
J2	Jack, appliance receptacle, a-c	76-3931
L1	Coil, aerial, special services	32-4561-3
L2	Coil, oscillator shunt	32-4562-2
LA1	Loop, antenna	Part of back-and-loop ass'y
LS1	Speaker, p-m	36-1627-8
PC1	Coupling network	30-6001
PL1	Plug, clock assembly	54-4878-2
R1	Resistor, oscillator grid, 22,00 ohms	66-3228340*
R2	Resistor, i-f screen dropping, 4700 ohms	66-2478340*
R3	Resistor, a-v-c filter, 2.2 megohms	66-5228340*
R4	Resistor, volume control, .5 megohm	
	Model 702	33-5565
	Model 706	33-5565-50
	Model 707	33-5566-49
R5	Resistor, diode load, 47,000 ohms	66-3478340*
R6	Resistor, grid return, 10 megohms	66-6108340*
R7	Resistor, plate load, 500,000 ohms	Part of PC1
R8	Resistor, grid return, 500,000 ohms	Part of PC1
R9	Resistor, cathode bias, 150 ohms	66-1158340*
R10	Resistor, B plus filter, 220 ohms, 1 watt	66-1224340*
R11	Resistor, B plus filter, 1000 ohms	66-2108340*
R12	Resistor, tube saver, 100 ohms	33-1343-3
S1	Switch, off-on	Part of R4
SW1	Switch, broadcast-special services	42-1796-2
T1	Transformer, oscillator	32-4453-6
T2	Transformer, output	32-8384*
W1	Line cord	L-2183*
Z1	Transformer, 1st i-f	32-4161A
Z2	Transformer, 2nd i-f	32-4240A

Reference Symbol	Description	Service Part No.
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### MISCELLANEOUS

#### PARTS COMMON TO ALL MODELS

Description	Service Part No.
Shield, tube	56-5629FA3
Shield, tube base	56-3978FA3
Socket, tube (5)	27-6265
Socket assembly, pilot lamp	27-6233-6
Spring, drive cord	56-2617
Spring, retaining	28-8610
Drive cord, 25-ft. spool	45-8750*

#### MODEL 53-702

Cabinet	
Maroon	10940
Biege	10940-2
Knobs	
Maroon	
Clock (3)	54-4983
Tuning and volume	54-4986
Biege	
Clock (3)	54-4983
Tuning and volume	54-4986-1
Clock	
Back-and-loop assembly	
Maroon	76-7807
Biege	76-7807-1
Backplate and clip assembly, pilot lamp	76-7808
Scale	
Radio	54-4985
Clock	54-4984
Pointer	56-9846
Clock cover	54-4989
Shaft, tuning	56-9807

#### MODEL 53-706

Cabinet	
Mahogany	10952
Blond	10952-1
Knobs	
Mahogany	
Clock (3)	54-4983-3
Tuning and volume	54-4557-6
Blond	
Clock (3)	54-4983-3
Tuning and volume	54-4557-7
Clock	41-2043
Back-and-loop assembly	76-8004
Lamp attachment	40-8916
Scale, radio	54-5160
Pointer	
Mahogany	56-10043
Blond	56-10043-1
Clock cover	54-4989
Shaft, tuning	56-10012

#### MODEL 53-707

Cabinet	10953
Knobs	
Clock (3)	54-4983-3
Tuning and volume	54-4557-6
Clock	41-2042-2
Back-and-loop assembly	76-8004
Scale, radio	54-5160
Pointer	56-10043
Shaft, tuning	56-10012
Door, cabinet	45-6735
Hook, door	56-10049
Hinge, door (2)	56-10048

## REVISIONS AND ADDITIONS TO MODELS 53-702, 53-706, AND 53-707 SERVICE MANUAL

### PARTS LIST ADDITIONS

Description	Service Part No.
Socket, tube (12AV6) .....	27-6203-14
MODEL 53-702	
Cabinet	
Spruce green .....	10940-4
White .....	10940-6
Knob	
Clock (3 required)	
Spruce green .....	54-4983
White .....	54-4983-5
Tuning and volume	
Spruce green .....	54-4986-2
White .....	54-4986-3
Clock (white only) .....	41-2042-2
Backplate and clip assembly, pilot light (white only) .....	76-8421
Cable, clock .....	41-3909-6
Shield, pilot light .....	54-8945
MODEL 53-706	
Bezel plate assembly	
Mahogany .....	76-7952
Blond .....	76-7952-1
Cable, clock .....	41-3909-5

### PARTS LIST CORRECTIONS

Reference Symbol	Description	Service Part No.
C 18	Condenser, electrolytic, 3-section .....	45-3037
MODEL 53-702		
Description		Service Part No.
Clock (all cabinets except white) .....		41-2042-1

### ADDITIONAL INFORMATION

The following figures give the lengths of the dial cords on each model, including a 1/4-inch loop at each end.

Model 53-702 .....	10 3/4 in.
Model 53-706 .....	16 1/2 in.
Model 53-707 .....	16 1/2 in.