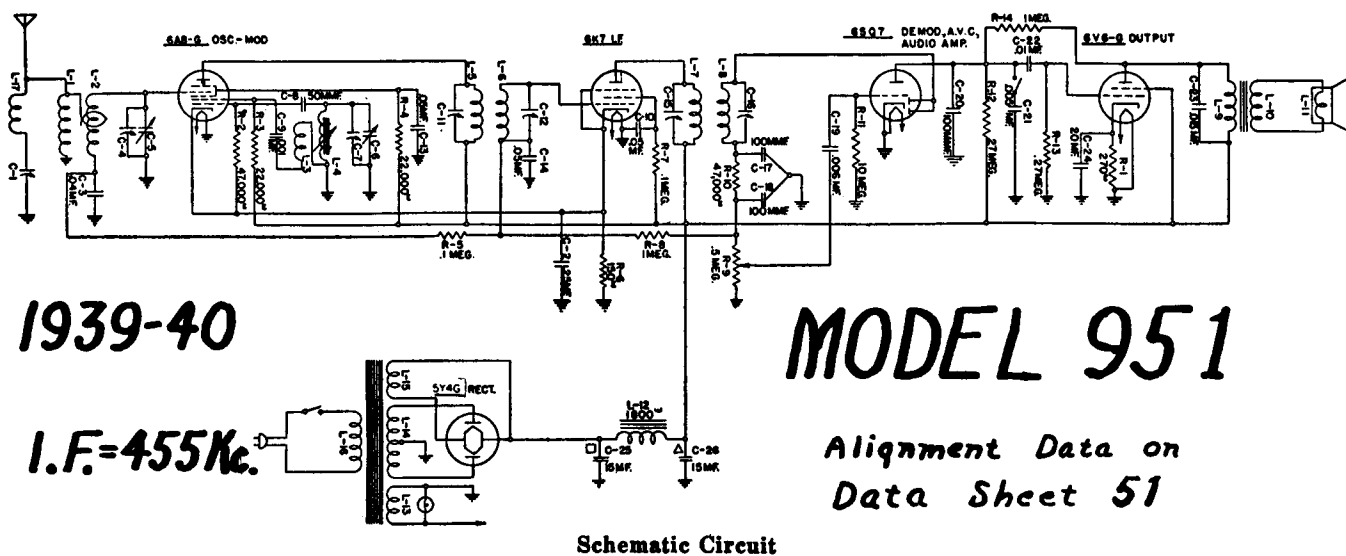


### NORMAL VOLTAGE READINGS

Use a good high resistance voltmeter having a resistance of at least 1000 ohms per volt. Take all D. C. voltage readings on the 500 volt scale except where an asterisk appears. Take all readings with chassis operating and tuned to 1000 Kc.—no signal. Use a line voltage of 120 volts or make allowance for the variation. Read from indicated socket terminals to chassis base. See Location Chart on Page 3 for position of terminals. A. C. Voltages are indicated by italics.

Tube	Circuit	Cap	Terminals of Sockets								Heater Voltages Between Heater Terminals	
			1	2	3	4	5	6	7	8	Socket Terminal Numbers	Volts A. C.
6A8G	Mod.—Osc.	0	0	0	+175	+82	—	+100	<i>6.3</i>	+2*	2-7	<i>6.3</i>
6K7	I. F. Amp.	0	0	0	+175	+65	+2*	—	<i>6.3</i>	+2*	2-7	<i>6.3</i>
6SQ7	Dem.—A. V. C. —Audio	—	0	0	0	0	0	+75	<i>6.3</i>	0	7-8	<i>6.3</i>
6V6G	Output	—	0	0	+160	+175	0	+75	<i>6.3</i>	+8*	2-7	<i>6.3</i>
5Y4G	Rectifier	—	0	0	<i>255</i>	—	<i>255</i>	—	+265	+265	7-8	5

\*Read on lowest possible scale of voltmeter.



### ALIGNING INFORMATION

NEVER REALIGN UNLESS ABSOLUTELY NECESSARY.

Use a good modulated signal generator (test oscillator) with variable output voltage and a sensitive output meter across the voice coil of the speaker.

Always align using the smallest possible input from the signal generator (except when wave trap adjustments are made). A strong signal makes adjustments inaccurate.

Always have receiver volume control "Full on".

Never align with tone control in bass position.

See Location Chart above for location of all the aligning adjustment screws.

#### Aligning Procedure (follow this order exactly)

##### I. Dial Pointer Adjustment.

With the plates of the gang tuning capacitor fully engaged, set the dial pointer directly on the upper black line at the low frequency end of the dial.

##### II. Intermediate Frequency Adjustments.

1. Tune set to extreme low frequency position. (.54 megacycles on dial scale).  
2. Connect the ground terminal of the signal generator to the ground binding post of the receiver.

3. Introduce a modulated signal of 455 kilocycles, using a 0.1 microfarad capacitor in series with the lead from the signal generator to the grid cap of the 6A8G tube. (Do not remove the grid clip from this tube.)

4. Adjust the I. F. Aligners for maximum output in the following order:

- a. Secondary of Second I. F. Transformer.
- b. Primary of Second I. F. Transformer.
- c. Secondary of First I. F. Transformer.
- d. Primary of first I. F. Transformer.

##### III. Wave Trap Adjustment.

1. Tune set to 1,000 kilocycles.

2. Leave the ground terminal of the signal generator connected to the ground binding post of the receiver.

3. Introduce a fairly strong modulated signal of 455 kilocycles to the antenna binding post using a 200 mmf. capacitor in series with the lead from the signal generator.

4. Adjust the wave trap aligner for **minimum** signal.

##### IV. Radio Frequency Adjustments.

(Leave the signal generator connected in the same way as for the wave trap alignment).

1. Set the signal generator's frequency and the receiver's tuning dial to 0.6 megacycles.

2. Adjust the iron core in the oscillator coil for maximum signal.

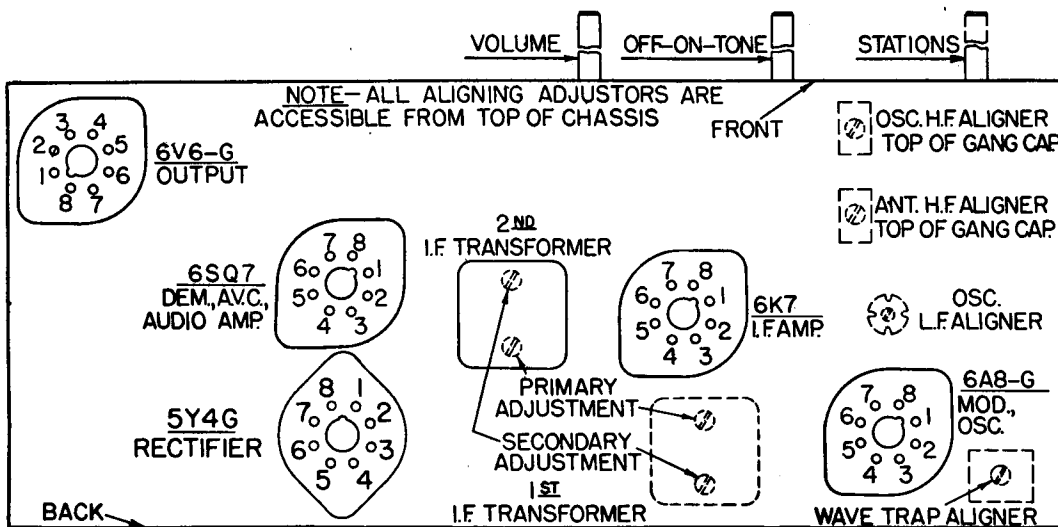
3. Set the signal generator's frequency and the receiver's tuning dial to 1.5 megacycles.

4. Adjust the two aligning capacitors on the variable capacitor for maximum signal.

5. Reset both the signal generator's frequency and the receiver's tuning dial to 0.6 megacycles and repeat operation 2.

6. Reset both the signal generator's frequency and the receiver's tuning dial to 1.5 megacycles and repeat operation 4.

NOTE. Operation 5 and 6 may be repeated as often as necessary to obtain maximum sensitivity.

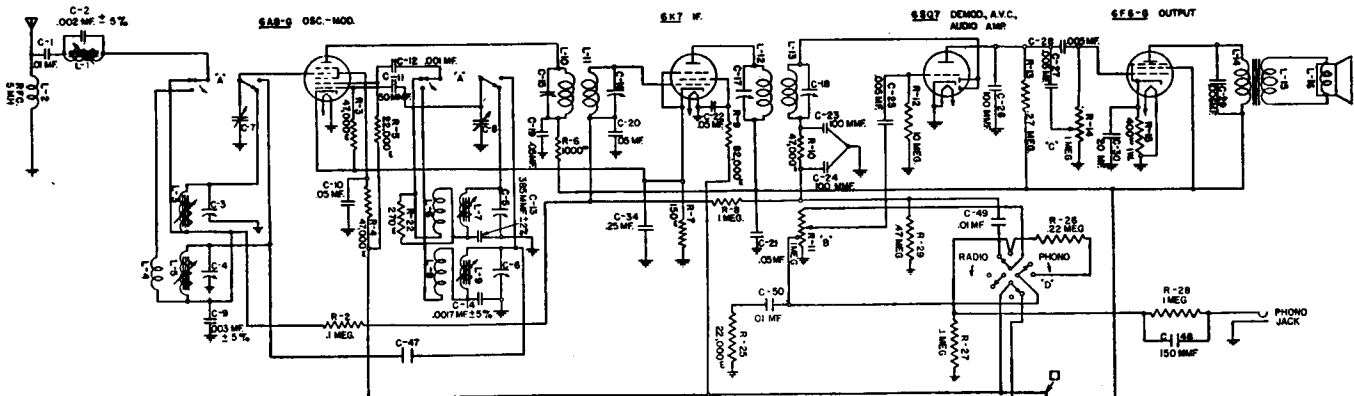


LOOKING AT INSIDE BOTTOM OF CHASSIS

Location Chart

# MODEL 951 ALIGNMENT DATA

Circuit on Data  
Sheet 50



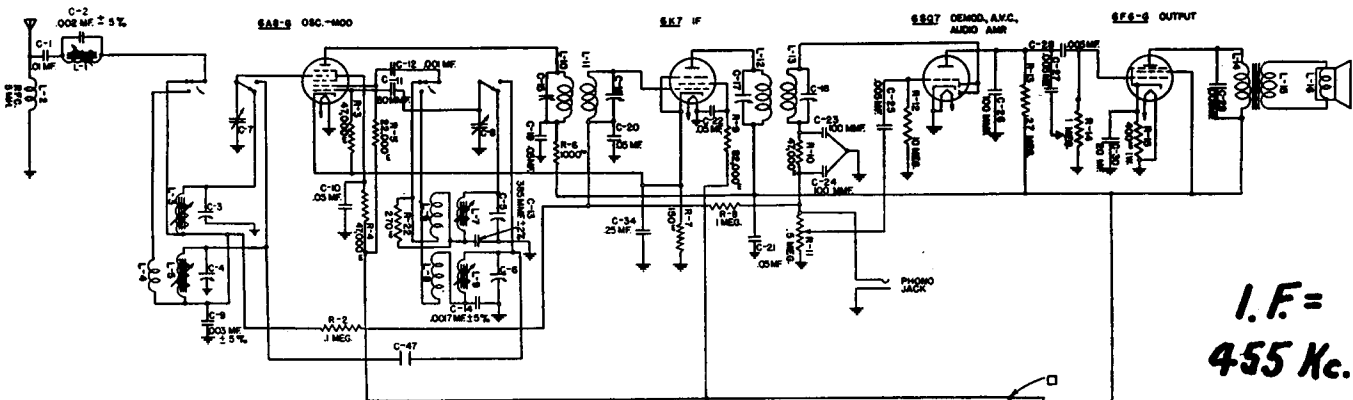
- A - RANGES
- B - VOLUME
- C - OFF-ON-TONE
- D - RADIO-PHONO SWITCH

# MODEL 952-P

## 1939-40

I.F.=455Kc.

Alignment Data, Voltages, Layout, on Data Sheet 53



I.F.=  
455 Kc.

# MODEL 952

## 1939-40

Alignment Data, Voltages, Layout, on Data Sheet 53

# ALIGNMENT DATA

## MODELS 972, 952, 952-P, 992

### NEVER ALIGN UNLESS ABSOLUTELY NECESSARY.

Use a good modulated signal generator (test oscillator) with variable output voltage and a sensitive output meter across the voice coil of the speaker.

Always align using the smallest possible input from the signal generator (except when wave trap adjustment is made). A strong signal makes adjustments inaccurate.

Always have receiver volume control full on.

Never align with tone control in "Bass" position.

See location chart above for location of all the aligning adjustment screws.

### Aligning Procedure (follow this order exactly)

#### I. Dial pointer adjustment.

With the plates of the gang tuning capacitor fully engaged, set the dial pointer directly on the vertical line located at the extreme low frequency end of the short wave band.

#### II. Intermediate frequency adjustments.

1. Set the range switch to Standard Broadcast position.
2. Tune set to extreme low frequency end of the dial.
3. Connect the ground terminal of the signal generator to the ground terminal of the chassis.
4. Introduce a modulated signal of 465 Kilocycles to the grid cap of the 6A8G Tube, using a 0.1 microfarad capacitor in series with the output lead of the signal generator. (Do not remove the grid clip from this tube.)

#### 5. Adjust the I. F. Aligners for maximum output in the following order:

- A. Secondary of second I. F. transformer.
- B. Primary of second I. F. transformer.
- C. Secondary of first I. F. transformer.
- D. Primary of first I. F. transformer.

### III. Radio frequency adjustments.

#### Short Wave Range (C Band)

1. Replace the 0.1 microfarad capacitor in series with the output lead of the signal generator with a 400 ohm carbon type resistor, and connect it to the antenna terminal of the chassis.
2. Set the range switch to the short-wave range position (C Band).
3. Set the signal generator frequency and the receiver tuning dial to 6 megacycles.
4. Adjust the 6 megacycles oscillator and antenna (iron cores) for maximum signal.
5. Set the signal generator frequency and the receiver tuning dial to 17 megacycles.
6. Adjust the 17 megacycles oscillator and antenna aligning capacitors for maximum signal.
7. Repeat operations three and four.
8. Repeat operations five and six.

#### Standard Broadcast Range (A Band)

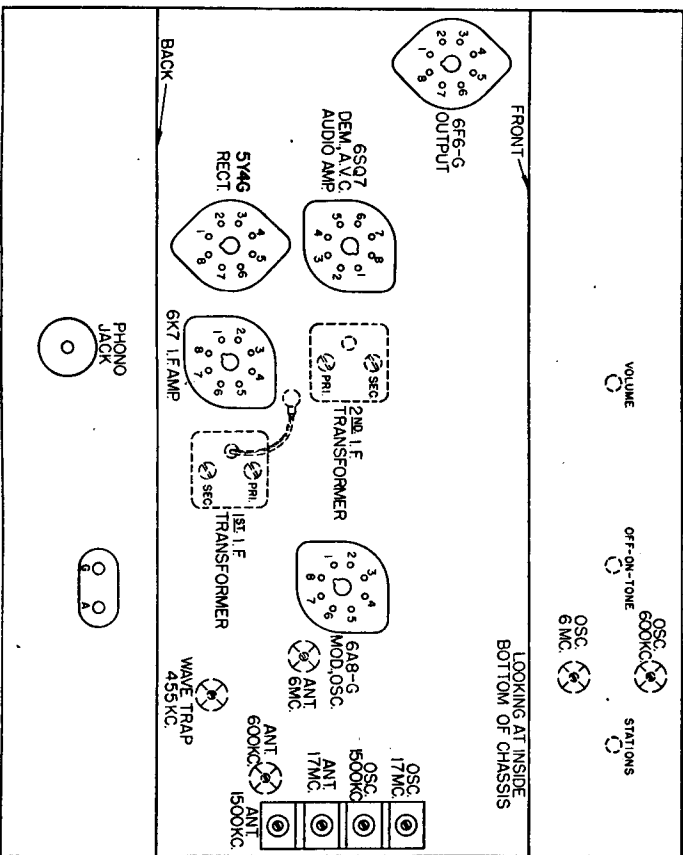
1. Replace the 400 ohm carbon type resistor in series with the output lead from the signal generator with a 200 micro-microfarad capacitor.
2. Set the range switch to the Standard Broadcast Range (A Band).
3. Set the signal generator frequency and the receiver tuning dial to 600 Kc.
4. Adjust the 600 Kc. oscillator and antenna (iron cores) for maximum signal.
5. Set the signal generator frequency and the receiver tuning dial to 1500 Kc.
6. Adjust the 1500 Kc. oscillator and antenna aligning capacitors for maximum signal.
7. Repeat operation three and four.
8. Repeat operation five and six.

### IV. Wave Trap Adjustment.

(Leave the receiver connected in the same manner as when adjusting the Standard Broadcast Range ("A" Band).)

1. Tune set to 1000 Kc.
2. Set the signal generator frequency to 465 Kc. and introduce a fairly strong modulated signal to the receiver.
3. Adjust the wave trap aligner for minimum signal.

## Location Chart - Models 952, 952P



## Normal Voltage Readings - Models 952, 952P

Tube	Circuit	Terminals of Sockets								Heater Voltages Between Heater Terminals		
		Cap	1	2	3	4	5	6	7	8	Terminal Numbers	Voltage A. C.
6A8G	Mod-Osc.	0	0	0	+260	+100	—	+180	6.5	+3*	2-7	6.5
6K7	I. F. Amp.	0	0	0	+260	+100	+3*	+270	6.5	+3*	2-7	6.5
6S97	Dem.-A. V. C.	—	0	—	0	—	—	+100	6.5	0	7-8	6.5
6F6G	Output	—	0	0	+240	+260	—	—	6.5	+15	2-7	6.5
6Y4G	Rectifier	—	0	0	315	0	315	—	+330	+330	7-8	5

\* Read on lowest possible scale of voltmeter.



