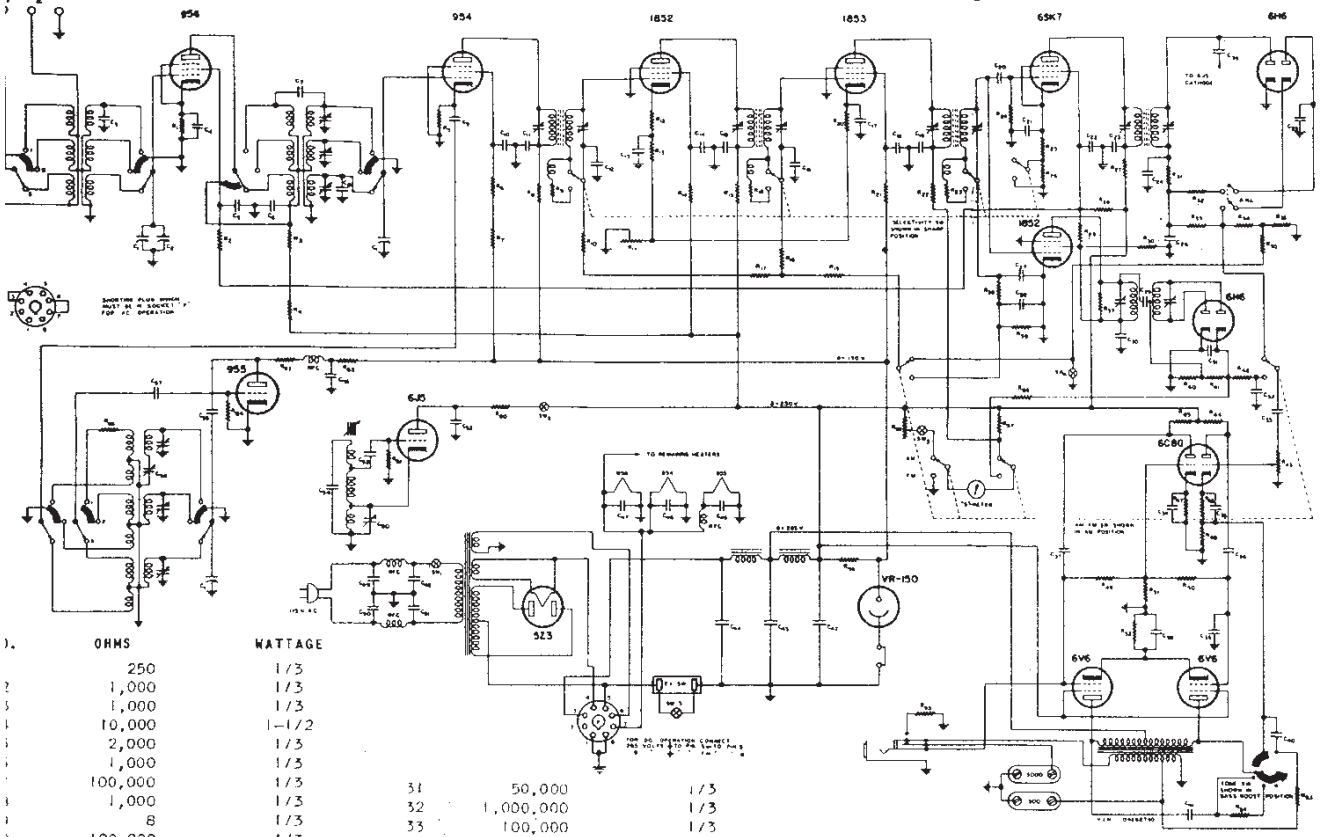
MODEL S-27

THE HALLICRAFTERS INC.

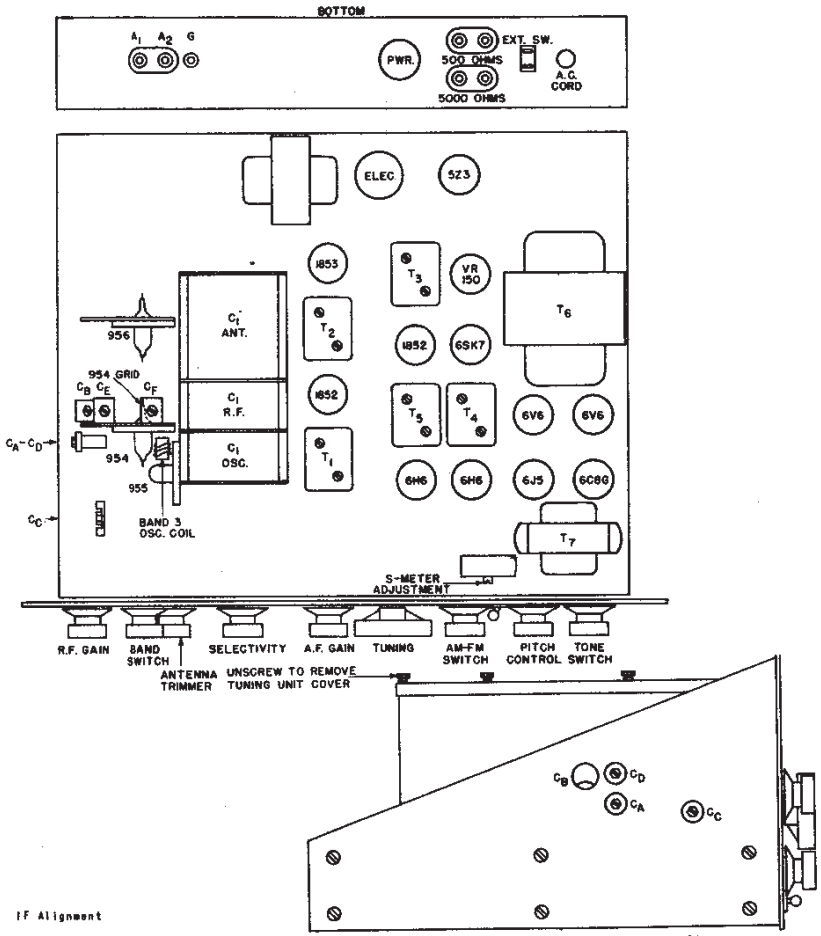


NO.	OHMS	WATTAGE
1	250	1/3
2	1,000	1/3
3	1,000	1/3
4	10,000	1-1/2
5	2,000	1/3
6	1,000	1/3
7	100,000	1/3
8	1,000	1/3
9	8	1/3
10	100,000	1/3
11	10,000	R.F. Gain Control
12	35	1/3
13	120	1/3
14	40,000	1/3
15	300	1/3
16	8	1/3
17	100,000	1/3
18	100,000	1/3
19	100,000	1/3
20	200	1/3
21	1,000	1/3
22	300	1/3
23	8	1/3
24	500,000	1/3
25	300	1/3
26	5,000	1/3
27	1,000	1/3
28	7,500	10 Wire Wound
29	2,000	1/3
30	20,000	1-1/2
31	50,000	1/3
32	1,000,000	1/3
33	100,000	1/3
34	250,000	1/3
35	500,000	1/3
36	250,000	1/3
37	15,000	1/3
38	50,000	1/3
39	250,000	1/3
40	100,000	1/3
41	100,000	1/3
42	200,000	1/3
43	500,000	Audio Gain Control
44	250,000	1/3
45	250,000	1/3
46	5,000	1/3
47	5,000	1/3
48	120	1/3
49	250,000	1/3
50	250,000	1/3
51	100,000	1/3
52	250	1-1/2
53	10,000	1/3
54	4,000	1-1/2
55	5,000	1-1/2
56	600,000	1/3
57	17	1/3 Wire Wound
58	1,500	S. Meter Zero Adj. Wire Wound
59	3,200	10
60	25,000	1-1/2
61	50,000	1/3
62	300	1/3
63	5,000	1/3
64	20,000	1/3
65	35	1/3

Band 1	27.5	to	47 mc
Band 2	46	to	82 mc
Band 3	82	to	145 mc

I.F. PEAK 5.25 MC

NO.	CAPACITY	VOLTAGE	TYPE
1	60 mmf	Per Section	Air
2	15 mmf	Ant.Trimmer	Air
3	5 mmf		3 Ceramicon
4	.002 mfd		Mica
5	300 mmf		Mica
6	.002 mfd		Mica
7	10. mmf		Ceramicon
8	10. mmf		Ceramicon
9	300 mmf		Mica
10	300 mmf		Mica
11	.01 mfd	600	Paper
12	.001 mfd		Mica
13	.02 mfd	400	Paper
14	.02 mfd	400	Paper
15	01 mfd	600	Paper
16	.001 mfd		Mica
17	.02 mfd	400	Paper
18	.02 mfd	400	Paper
19	.01 mfd	600	Paper
20	50 mmf		Mica
21	.02 mfd	400	Paper
22	.02 mfd	400	Paper
23	.01 mfd	600	Paper
24	50 mmf		Mica
25	.05 mfd	400	Paper
26	50 mmf		Mica
27	100 mmf		Mica
28	500 mmf		Mica
29	25 mmf		Mica
30	.002 mfd		Mica
31	50 mmf		Mica
32	500 mmf		Mica
33	.05 mfd	400	Paper
34	30 mfd	25	Electrolytic
35	30 mfd	25	Electrolytic
36	.05 mfd	400	Paper
37	.05 mfd	400	Paper
38	20 mfd		Electrolytic
39	.002 mfd		Mica
40	.05 mfd	400	Paper
41	.05 mfd	400	Paper
42	10. mfd	350	Electrolytic
43	30 mfd	350	Electrolytic
44	10 mfd	400	Electrolytic
45	300 mmf		Mica
46	300 mmf		Mica
47	300 mmf		Mica
48	.01 mfd	600	Paper
49	.01 mfd	600	Paper
50	.01 mfd	600	Paper
51	.01 mfd	600	Paper
52	.002 mfd		Mica
53	100 mmf		Mica
54	200 mmf		Ceramicon
55	300 mmf		Mica
56	50 mmf		Ceramicon
57	.001 mfd		Mica
58	450 mmf		Pad
59	2 mmf		Twisted Pair
60	25 mmf		S.O. Pitch Control Air



IF Alignment

Connect a signal generator to the grid of the 954 converter tube. Use either a small clip or a piece of flexible wire wound around the grid terminal. Do not attempt to solder to the tube as the heat is certain to crack the glass. Connect a suitable output meter across the speaker terminals.

Controls should be set as follows:

RF gain control at maximum sensitivity.
Band switch in band 2.
Selectivity switch in sharp position.
AM-FM switch in AM position.
Audio gain control in maximum position.
AVC switch in off position.
ANL switch in off position.
BFO switch in off position.

Tune the signal generator to 5.25 megacycles and align transformers T_1, T_2, T_3 and T_4 for maximum response.

A bakelite screw-driver with a metal or insulated tip is necessary for accurate alignment.

This alignment process should be repeated at least once to assure greatest possible selectivity.

To align the "discriminator" transformer (T_5) turn the selectivity switch to the broad position and the AM-FM switch to the AM position.

Leave the signal generator set at the frequency originally used for IF alignment with the modulation left on. Rotate the trimmer control across the discriminator (T_5) secondary (nearest the front of the chassis) until the signal drops to zero. As this point is approached very suddenly, turn the control very slowly. Now slightly detune the signal generator until the output meter gives a readable indication. Adjust the primary trimmer control of the discriminator transformer for maximum response.

Next detune the signal generator to either side of resonance and note the maximum output in each case as indicated on the output meter. These values should be the same for good balance. If they are not, then tune the signal generator to the lower of the two peaks and adjust the primary until the output rises an amount equal to about half the difference of the two outputs previously noted.

Retest for balance as above and readjust the primary till both maximum readings are alike when the signal generator is detuned to either side of resonance.

If a balance cannot be obtained, it is an indication that the discriminator secondary trimmer control has been adjusted off its proper center and will require a very slight readjustment in either direction. The direction of adjustment that will cause the off-tune peaks to assume the same values is the correct one. Care must be taken in adjusting the discriminator secondary control as even a slight misadjustment will result in the distorted reception of frequency-modulated signals.

RF Alignment

Connect a high frequency signal generator to the antenna terminal (A_1) through a 75 ohm resistor and the ground of the generator to the ground terminal of the receiver. Leave terminal A_2 connected to the ground terminal.

The Ferris Signal Generator Model 18B is recommended for alignment purposes. If this is not available, harmonics of a standard signal generator may be used.

The controls should be set in the same position as for IF alignment.

Set the AM-FM switch in the AM position.
Set the bandswitch on band 1.
Tune the generator and receiver to 42 mc.

Adjust oscillator trimmer C_A until the signal is heard. The frequency of the oscillator is higher than that of the signal. Next adjust trimmer C_B and the antenna trimmer for maximum response.

Tune both receiver and signal generator to 28 megacycles and adjust padder C_C for maximum response while rocking the tuning control. Then repeat the alignment at the high frequency end as described.

BAND 2

Tune the receiver and signal generator to 75 megacycles. Adjust trimmer C_D until the signal is heard. In this band, the frequency of the oscillator is lower than that of the signal. Adjust the antenna trimmer and trimmer C_E for maximum response while rocking the gang condenser. No padder condenser adjustment is provided for the low-frequency end of this band.

BAND 3

Tune the receiver and signal generator to 120 megacycles. Adjust trimmer C_F and the antenna trimmer for maximum response while rocking the gang. It is not recommended that the frequency of the oscillator in this band be adjusted except at the factory. Should it be impractical to return the receiver to the factory for adjustment, then the following instructions are included.

Remove the top cover and locate the high frequency oscillator coil. The white wire winding, one end of which is connected to a terminal on the form is the primary. By carefully shifting the free end of this winding the frequency can be changed over a sufficient range. This lead should be cemented in place with Q-Max or any other low loss cement when adjustment is completed.

Repeat the adjustment of C_F as described above after shifting the frequency of the oscillator.

As in band 2, the frequency of the oscillator is higher than that of the signal. No padder condenser adjustment is provided for the low frequency end of this band.