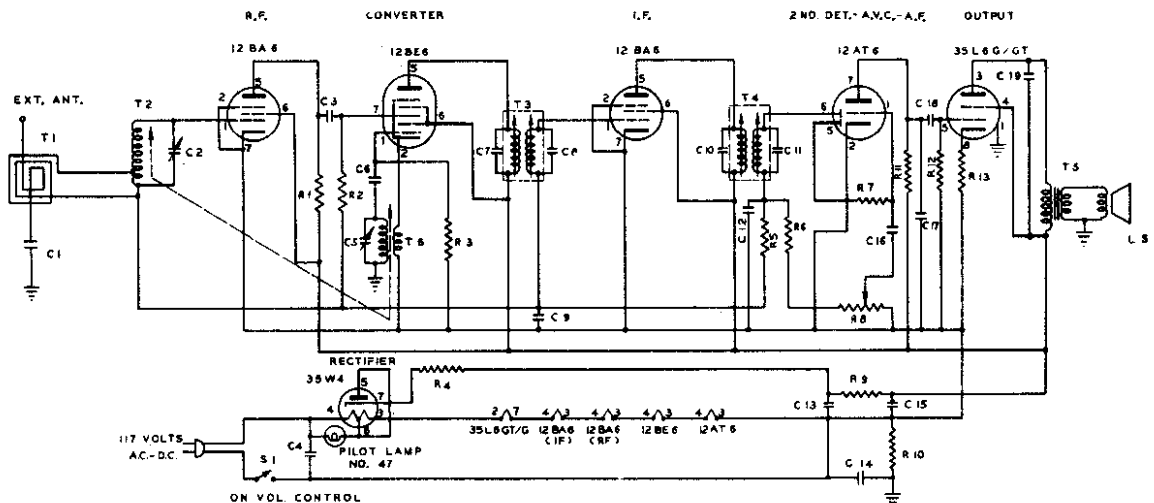


HOFFMAN RADIO CORP.

MODELS A202, A309,
Chassis 119



MODELS A202 & A309

DESCRIPTION

Hoffman Models A202 and A309 are electrically identical and differ in cabinet design only. The receiver consists of a 6-tube broadcast band AC-DC Superheterodyne incorporating a built-in loop antenna.

SPECIFICATIONS

Tuning Range 540 Kc to 1650 Kc
 Intermediate Frequency 455 Kc.
 Power Supply 115 V. D.C. or 115 V. A.C. 50-60 C.P.S.
 Power Consumption 28 Watts
 Undistorted Audio Output 6 Watt
 Maximum Audio Output 9 Watt
 Loudspeaker 5-inch round P.M.

NORMAL OPERATING CURRENTS

35W4 Cathode Current 60 Ma.
 35L6 Cathode Current 30 Ma.
 Meter inserted in circuit at cathode.

SYMBOL	DESCRIPTION	HOFFMAN No.
C1	.005 Mfd. 600 Volt Tubular Paper	4102
C2, C5	Dual Padder 280 Mmf. Per Section	4307
C3, C6	100 Mmf. ± 20% Mica	4000
C4	.05 Mfd. 400 Volt Tubular Paper	4101
C7, C8	100 Mmf. ± 10% Ceramic	4012
C9	.05 Mfd. 200 Volt Tubular Paper	4100
C10, C11	100 Mmf. ± 10% Ceramic	4012
C12	270 Mmf. ± 20% Mica	4001
C13, C15	Dry Electrolytic (30-50 Mfd./150 V)	4201
C14	.2 Mfd. 200 Volt Paper Tubular	4108
C16	.005 Mfd. 600 Volt Paper Tubular	4102
C17	270 Mmf. ± 20% Mica	4001
C18	.005 Mfd. 600 Volt Tubular Paper	4102
C19	.02 Mfd. 400 Volt Tubular Paper	4106
L5	5" PM Loudspeaker	9003
R1	2200 Ohm ± 20% 1/2 Watt	4512
R2, R6	47,000 Ohm ± 20% 1/2 Watt	4504
R3	22,000 Ohm ± 20% 1/2 Watt	4501
R4	47 Ohm ± 20% 1/2 Watt	4508
R5	2.2 Megohm ± 20% 1/2 Watt	4502
R7	10 Megohm ± 20% 1/2 Watt	4505
R8	.5 Megohm Pot. with Switch (Volume)	4802
R9	500 Ohm ± 10% 5 Watt	4700
R10, R12	.47 Megohm ± 20% 1/2 Watt	4506
R11	.22 Megohm ± 20% 1/2 Watt	4500
R13	150 Ohm ± 20% 1/2 Watt	4510
S1	On-Off Switch (on Volume Control)	
T1	Antenna Loop	5238
T2	R.F. Coil	55203
T3	Input I.F. Transformer (455 Kc.)	55201
T4	Output I.F. Transform (455 Kc.)	55202
T5	Audio Output Transformer	5101
T6	Oscillator Coil	55204

NORMAL OPERATING VOLTAGES

The following table lists the normal operating voltages to be expected at the various tube socket terminals.

PIN NO.	1	2	3	4	5	6	7	8
12BA6(R.F.)	— 45	0.	25. A.C.	37.5 A.C.	+ 65.	+ 80.	0.	
12BE6	4.6*	0.	12.5 A.C.	25. A.C.	+ 80.	+ 80.	0.	
12BA6 (I.F.)	— 45	0.	37.5 A.C.	50. A.C.	+ 80.	+ 80.	0.	
12AT6	— 1.5*	0.	0.	12.5 A.C.	0.	— 15.	+ 37.5	
35L6	0.	85 A.C.	+ 75 D.C.	+ 80. D.C.	0.	0.	50. A.C.	+ 4.6
35W4	115 A.C.	0.	85. A.C.	115. A.C.	110. A.C.	110. A.C.	+ 110. D.C.	

D.C. voltages measured with 1000 ohm/volt meter
 A.C. voltage measures with 1000 ohm/volt meter
 All voltages measured with reference to B-Line voltage 115.

* These readings taken with V. T.V. M.

NOTE: The above readings are obtained with no signal input to receiver.

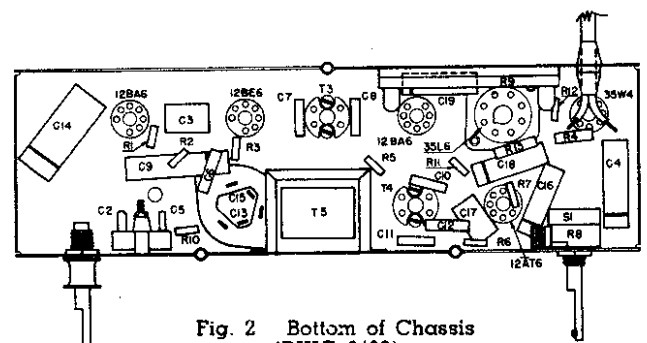


Fig. 2 Bottom of Chassis
(DWG 6468)

MODELS A202, A309
MODEL B400

HOFFMAN RADIO CORP.

A202, A309

ALIGNMENT PROCEDURE

CAUTION:

No alignment adjustments should be attempted without first thoroughly checking over all other possible causes of trouble such as defective tubes, resistors, and condensers. In order to align the receiver properly, remove the chassis from the cabinet and proceed as follows:

EQUIPMENT REQUIRED:

1. Signal Generator.
2. Output Meter with 2.5 Volt Scale.
3. .25 Mfd. Condenser.

I.F. ALIGNMENT:

1. Connect output meter across speaker voice coil; set meter on 2.5 volt scale.
2. Connect output of signal generator directly to 12BE6 control grid; connect ground side of generator to chassis of receiver through .25 Mfd. condenser. Set signal generator on 455 Kc (modulated).
3. Adjust I.F. slugs (first T4 and then T3) for maximum reading on output meter.

Note: Keep signal level low, just enough to keep maximum reading on lower half of meter scale. Tuning condenser plates should be all the way out; volume control should be on full. After adjustment, put a drop of wax on each I.F. tuning slug to hold it in place.

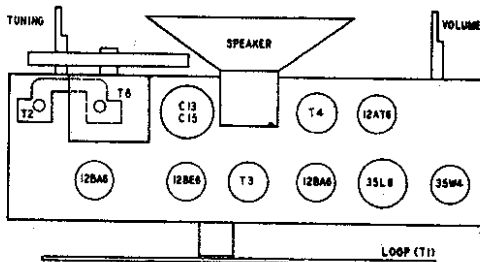


Fig. 1 Top of Chassis
(DWG 1023-4)

B400

ALIGNMENT PROCEDURE

CAUTION:

No alignment adjustments should be attempted without first thoroughly checking over all other possible causes of trouble such as defective tubes, resistors, and condensers. In order to align the receiver properly, remove the chassis from the cabinet and proceed as follows:

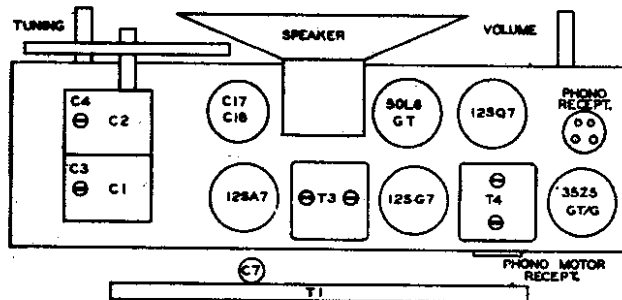
EQUIPMENT REQUIRED:

1. Signal Generator.
2. Output Meter with 2.5 Volt Scale.
3. .1 Mfd. Condenser.

I. F. ALIGNMENT:

1. Connect output meter across speaker voice coil; set meter on 2.5 volt scale.
2. Connect output of signal generator directly to antenna post on loop; connect ground side of generator to chassis of receiver through .1 Mfd. condenser. Set signal generator on 455 Kc (modulated).
3. Adjust I.F. trimmers (first T4 and then T3) for maximum reading on output meter.

NOTE: Keep signal level low, just enough to keep maximum reading on lower half of meter scale. Tuning condenser plates should be all the way out, volume control should be on full.



R.F. ALIGNMENT:

control slugs

1. Set receiver tuning condenser with plates all the way in.
2. Set signal generator on 540 Kc (modulated) and connect generator output to antenna post on receiver. The ground side of the generator should be connected to receiver B through a .25 Mfd. condenser.
3. Tune in signal by adjusting oscillator trimmer C5.
4. Adjust output of signal generator to obtain deflection on lower half of meter scale.
5. Adjust oscillator trimmer for maximum output.
6. Set signal generator on 1650 Kc and check signal with tuning condenser plates all the way out.
7. Set signal generator on 1470 Kc.
8. Tune in signal on receiver and adjust rf trimmer C2 for maximum reading on output meter. Feed only enough signal from the generator to keep maximum reading on lower half of meter scale.
9. Recheck at 600 Kc, 1000 Kc and 1410 Kc for tracking and readjust as required.

DIAL ADJUSTMENT:

To set the dial on calibration, pick up a station of known frequency near the center of the dial and move the pointer by hand as required.

R.F. ALIGNMENT:

1. Set tuning condenser with plates completely out.
2. Set signal generator at 1650 Kc (modulated) and feed its output into a loop of wire about 6" in diameter. Place this loop about one foot away from and parallel to the receiver loop antenna.
3. Tune in signal by adjusting oscillator trimmer (C4).
4. Adjust output of signal generator to obtain deflection on lower half of meter scale.
5. Adjust oscillator trimmer (C4) for maximum output.
6. Set signal generator at 1400 Kc and tune in signal with tuning condenser.
7. Adjust antenna trimmer (C3) while rocking gang condenser for maximum reading on output meter. Feed only enough signal from generator to keep maximum reading on lower half of meter scale.

DIAL ADJUSTMENT:

To set the dial on calibration, tune in a station of known frequency near the center of the dial and move the pointer by hand as required.