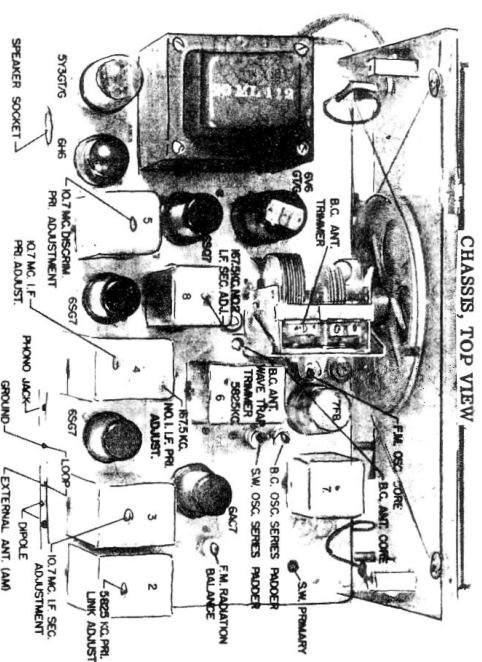


# Crosley A3468 AC & AZ3468 AC AM/FM Receiver / Phonograph

[illegible]

### FOR OUTPUT METER ALIGNMENT

**DUMMY ANTENNAS TO BE USED WITH GENERATOR OUTPUT:**

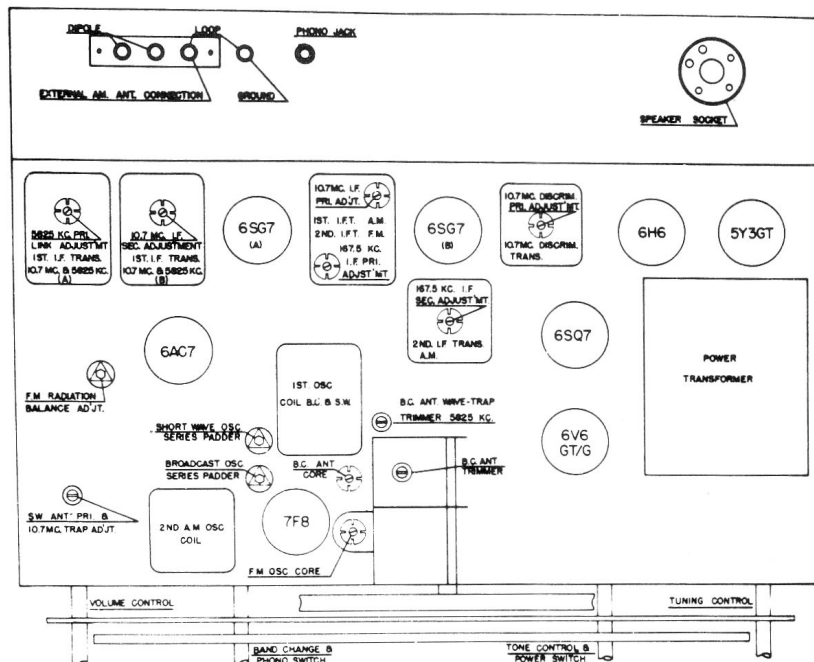
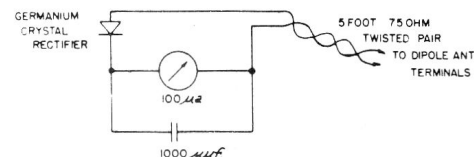
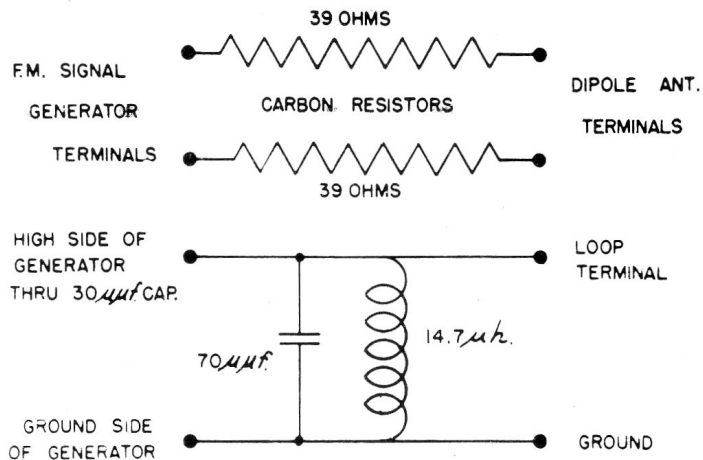
### DUMMY LOOP ANTENNA:

**SHUNTS:**

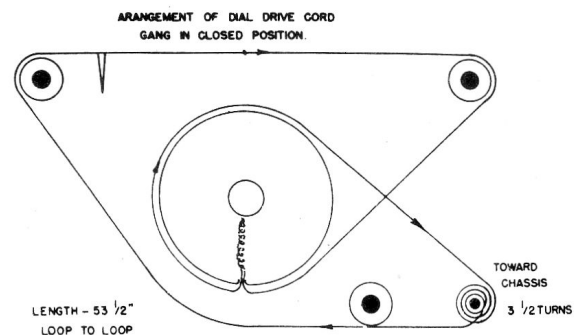
**FIELD STRENGTH METER:**

**NOTE:** Connect condenser directly across meter terminals and crystal directly to one meter terminal, so leads are as short as possible.

### TOP AND BACK VIEW OF CHASSIS SHOWING TUBE LOCATIONS AND ALIGNMENT ADJUSTMENTS



# Crosley A3468AC & AZ3468AC Alignment Data



#### OUTPUT METER ALIGNMENT

##### 67.5 KC. I. F. TRANSFORMER ALIGNMENT: (For maximum output)

1. (a) Shunt primary of transformer No. 8 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from ground to link between transformers No. 5 and 8. Adjust secondary of 2nd I. F. Transformer No. 8 (above chassis).
- (b) Shunt secondary of transformer No. 8 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from diode plate (Pin No. 4) of the 6SQ7 to shielded lead junction on transformer and adjust primary of 2nd I. F. Transformer No. 8 (bottom of chassis).
2. (a) Connect signal generator to grid of 1st I. F. 6SG7 (A).
- (b) Shunt primary of transformer No. 4 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from plate of the 6SG7 (A) to the transformer side of the 2200 ohm resistor (106). Adjust secondary of 1st I. F. Transformer No. 4 (bottom of chassis).
- (c) Shunt secondary of transformer No. 4 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from the grid of the 6SG7 (B) to transformer side of the 68,000 ohm resistor (109). Adjust primary of 1st I. F. Transformer No. 4 (top of chassis).

##### 10.7 MC. DISCRIMINATOR TRANSFORMER ALIGNMENT:

3. (a) Adjust discriminator transformer No. 5 secondary (bottom of chassis) padder for null point.
- (b) Tune signal generator for maximum output meter reading, approximately 75 to 100 KC. off of the 10.7 megacycle null point and note output meter reading. Retune signal generator to the opposite side of the 10.7 megacycle null point to maximum reading on the output meter reading. If the two readings are not equal, adjust discriminator primary padder until equal output meter readings and equal peak spacing are obtained on both sides of the 10.7 megacycle null point.

##### 10.7 MC. I. F. TRANSFORMER ALIGNMENT:

4. (a) Set signal generator to peak on high side of 10.7 MC. and adjust 10.7 MC. primary (top) and secondary (bottom) of transformer No. 4 for maximum output and note output meter reading.
- (b) Set signal generator to peak on low side of 10.7 MC. and note output meter reading. If readings are unequal, readjust primary and secondary slightly until output meter readings and peak spacings are equal on both sides of the 10.7 MC. null point.
5. (a) Connect signal generator output to either lug of the F.M. ANTENNA Transformer Primary Trimmer (60). Connect signal generator ground to the receiver chassis at a point close to the trimmer to keep lead lengths to a minimum. Shielded cable of generator output should not be draped near under side of chassis.
- (b) Set signal generator to peak on high side of 10.7 MC. and adjust 10.7 MC. primary on transformer No. 2 (bottom of chassis) and 10.7 MC. secondary on transformer No. 3 (top of chassis) for maximum output, and note reading on output meter.
- (c) Set signal generator to peak on low side of 10.7 MC. and note output meter reading. If meter readings are not equal, readjust primary and secondary until equal readings are obtained on the peaks on both sides of 10.7 MC. Peaks should appear approximately 80 KC. on each side of 10.7 MC.

##### 5825 KC. I. F. TRANSFORMER ALIGNMENT:

6. (a) Turn core adjustment screw on bottom of 2nd A. M. Oscillator Coil No. 7 until core is out of coil. DO NOT USE FORCE.
- (b) Turn core adjustment in until first peak (maximum output) is obtained.
7. (a) Connect signal generator output to link coupling (see chart).
- (b) Adjust 5825 KC. secondary trimmer and 5825 KC. secondary link adjustment on bottom of 1st I. F. Transformer No. 3 and retune 2nd A. M. Oscillator coil No. 7; adjust alternately for maximum output.
8. (a) Connect signal generator output to 6AC7 grid (see chart).
- (b) Adjust 5825 KC. primary trimmer on bottom and 5825 KC. primary link adjustment on top of 1st I. F. Transformer No. 2 for maximum output.

##### FREQUENCY MODULATED BAND ALIGNMENT:

9. (a) Pre-set F. M. Oscillator iron core (131) located on the top of the chassis to midway position.
- (b) Pre-set F. M. radiation balance adjustment (57) on top of the chassis to approximately two turns from the closed position.
- (c) Set signal generator to 100 megacycles A. M. modulated at 400 cycles.
- (d) Set dial pointer to channel 261 (100 MC).
- (e) Adjust F. M. Oscillator trimmer (54) (bottom of chassis) to maximum output (on sets without oscillator trimmer, adjust oscillator core) but keep signal generator output as low as possible.
- (f) Short circuit F. M. Antenna primary trimmer (60) with hairpin shorting shunt.
- (g) Adjust F. M. Antenna secondary trimmer (58) on bottom of chassis for maximum output.
- (h) Transfer shorting shunt to F. M. Antenna secondary trimmer (58) and adjust F. M. Antenna primary trimmer (60) for maximum output.
- (i) Remove shorting shunt.

##### F. M. RADIATION BALANCE ADJUSTMENT:

10. (a) Disconnect signal generator and connect Field Strength Meter to the dipole antenna terminals. (See paragraph on Field Strength Meter under title "Alignment Equipment").
- (b) Set dial pointer to channel 215.
- (c) Adjust F. M. Radiation Balance Trimmer (57) (on top of chassis) to null point. If this trimmer adjustment is changed more than a quarter turn repeat step 9 (f) to (i), and 10.

##### SHORTWAVE ALIGNMENT:

11. (a) Set signal generator to 9.6 MC. Amplitude Modulated at 400 cycles.
- (b) Turn volume control to maximum.
- (c) Adjust shortwave oscillator series padder (55) on top of chassis for maximum output with dial pointer set at 9.6 MC.
12. (a) Set signal generator to 11.8 MC. Amplitude Modulated at 400 cycles.
- (b) Set dial pointer to 11.8 MC.
- (c) Adjust shortwave oscillator core on bottom of chassis for maximum output. Repeat steps 11 (a) and (c) and 12 (a), (b) and (c) until dial tracks at 9.6 and 11.8 MC.
13. (a) Set signal generator to 10.7 MC. Amplitude Modulated at 400 cycles.
- (b) Shunt shortwave Antenna Primary Padder (51) (lug connected to coil) to chassis with shorting clip.
- (c) Retune set to 10.7 MC. signal, increase signal generator output if necessary.
- (d) Adjust shortwave antenna secondary trimmer (59) for maximum output while rocking gang.
- (e) Remove shorting clip.
- (f) Shunt across shortwave antenna secondary trimmer (59) with shorting clip.
- (g) Retune radio to 10.7 MC. signal, increase signal generator output, if necessary.
- (h) Adjust SW. antenna primary padder (51) (top of chassis) for maximum output while rocking gang.
- (i) Remove shorting clip.

##### WAVE TRAP ADJUSTMENT (10.7 MC.):

14. (a) Turn band switch to F. M. position.
- (b) Connect field strength meter from signal generator side of 30 mmf. condenser to chassis.
- (c) Increase or decrease signal generator output until field strength meter reads between 10 and 15 microvolts.
- (d) Adjust SW. Antenna primary padder (51) for lowest reading on Field Strength Meter. Make this adjustment slowly, otherwise the dip may be passed unnoticed when a highly damped meter is used.
- (e) Disconnect Field Strength Meter.

##### BROADCAST BAND ALIGNMENT:

15. (a) Connect dummy loop (14.7 uh) to Signal Web terminal and ground terminal.
  - (b) Connect Signal Generator in series with a 30 mmf. condenser to high side of dummy loop.
  - (c) Preset Broadcast Antenna Wave Trap (85) on top of chassis to approximately two turns from the closed position.
  - (d) Set signal generator to 535 KC. Amplitude Modulated.
  - (e) Set dial pointer to 535 KC. (tuning condenser gang closed).
  - (f) Adjust Broadcast Oscillator Series Padder (56), on top of chassis, for maximum output.
  16. (a) Set signal generator to 1620 KC.
  - (b) Set dial pointer to 1620 KC. (tuning condenser gang to minimum capacity, but not against stop).
  - (c) Adjust Broadcast Oscillator core on the bottom of chassis for maximum output.
  - (d) Repeat steps 15 (d) to 16 (c) until frequency shift stops.
  17. (a) Set signal generator to 1400 KC.
  - (b) Tune receiver to 1400 KC. maximum output.
  - (c) Adjust Broadcast Antenna Trimmer on top of tuning condenser gang for maximum output.
  18. (a) Set signal generator to 600 KC.
  - (b) Tune receiver to 600 KC. maximum output.
  - (c) Adjust Broadcast Antenna Core (132), on top of chassis, for maximum output while rocking gang.
- NOTE: B. C. ANTENNA CORE IN FIRST MODELS ONLY. OMIT STEP 18 WHEN ALIGNING LATER MODELS.**

##### 5825 KC. WAVE TRAP ADJUSTMENTS:

19. (a) Set signal generator to 5825 KC. Amplitude Modulated.
  - (b) Set dial pointer to approximately 1400 KC. and retune signal generator to maximum output.
  - (c) Adjust signal generator output to approximately midscale reading on output meter.
  - (d) Adjust Broadcast Antenna Wave Trap Trimmer (85) for lowest reading on output meter.
- NOTE: All air trimmers should be locked in position by applying a drop of household cement on the screw threads.**

# Crosley

## A3468AC & AZ3468AC

## Alignment Data

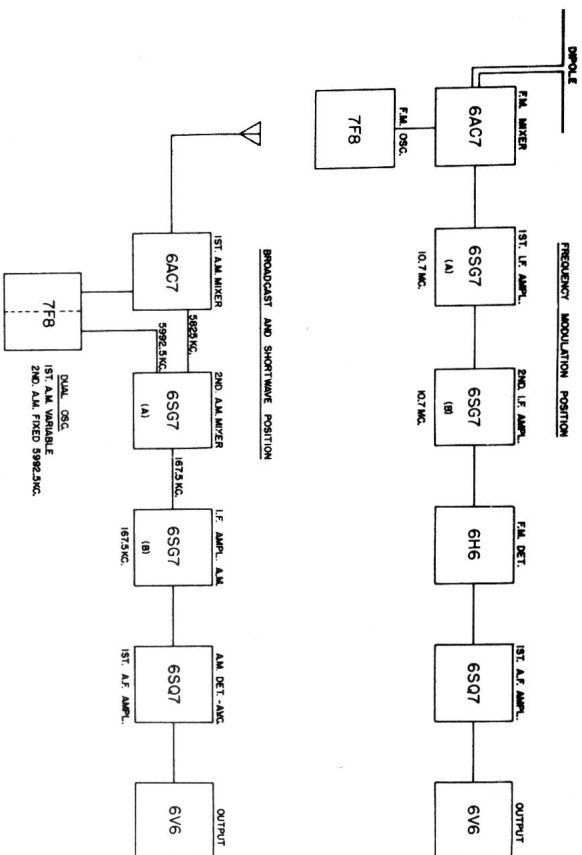
Use this procedure in conjunction with alignment chart.

Refer to alignment chart first for connection of signal generator and control settings. Then follow procedure.

# ALIGNMENT PROCEDURE

1. This receiver has been aligned at the factory for best performance, and no attempt should be made to realign this receiver unless the proper test equipment is available.
2. Turn the tuning condenser to full mesh, against stop, and set the dial pointer to reference point which is Channel 200 on the dial.
3. Set tone control knob to the treble position, (extreme right).
4. When output meter is used, connect across voice coil. (3.2 ohms).
5. Feed an R. F. Signal modulated 30% at 400 cycles to the receiver as indicated on the alignment chart; connect signal generator ground terminal to the chassis of the receiver, except where noted.
6. When F. M. Signal generator is used, a 30% modulated signal is equal to 22.5 kilocycles deviation.
7. Turn volume control knob to maximum clockwise position and adjust signal generator output to produce a noticeable output meter reading, (approx. 500 mW). Keep signal generator output as low as possible to prevent excessive AVC action in the receiver.
8. The low impedance "Signal Web" antenna should remain connected at all times.

## BLOCK DIAGRAM OF CIRCUITS



# ALIGNMENT CHART (Output Meter Method)

Align- ment Se- quence	Signal Frequency	Generator Output in Series with	To	Position of Range Tuning Dial Switch or Tuning Cap.	Adjust	Osc. Freq.	Remarks
1.	167.5 KC.	0.1 MFD	2nd I.F. Grid 6SG7 B	S.W.	Open	2nd I.F. Trans. 8	
2.	167.5 KC.	0.1 MFD	1st I.F. Grid 6SG7 A	S.W.	Open	1st I.F. Trans. 4	
3.	10.7 MC.	30 MMF	2nd I.F. Grid 6SG7 B	F.M.	Open	Discriminator Trans. 5	
4.	10.7 MC.	30 MMF	1st I.F. Grid 6SG7 A	F.M.	Open	2nd I.F. 10.7 Trans. 4	
5.	10.7 MC.	30 MMF	See Procedure	F.M.	Open	1st I.F. 10.7 Trans. 2 & 3	Signal Generator (Ground Connection as short as possible)
6.	5825 KC.	30 MMF	1st I.F. Grid 6SG7 A	S.W.	Open	2nd A.M. Osc. Core 7	167.5 KC.
7.	5825 KC.	30 MMF	*Link Couplings on 10.7 I.F. 2	S.W.	Open	5825 KC. I.F. Trans. 3	167.5 KC. Short Lead Be- tween Trans- formers 2 & 3
8.	5825 KC.	30 MMF	6AC7 Grid	S.W.	Open	5825 KC. I.F. Trans. 2	167.5 KC. Above
9.	100 MC.	78 ohm Dumny	F.M. Dipole Ant. Terms.	F.M.	Channel 261	Osc. Core & Trim. F.M. Ant. Trims. Pr. & Sec.	See Circuit Under the Title "Align- ment Equipment"
10.	87.9 MC.	78 ohm Dumny	F.M. Dipole Ant. Terms.	F.M.	Closed	F.M. Osc. Core	10.7 MC. Above
11.	107.9 MC.	78 ohm Dumny	F.M. Dipole Ant. Terms.	F.M.	Channel 300	F.M. Osc. Trimmer	10.7 MC. Above
12.	Disconnect Field Strength Meter		Disconnect Generator Connect	F.M.	Channel 215	Radiation Bal. Trimmer (Null Point)	See Paragraph on Field Strength Meter, under "Alignment Equip."
13.	9.6 MC.	30 MMF	One F.M. Ant. Term.	S.W.	9.6 MC.	S.W. Oscill- ator Series Padder	5825 KC. Above Generator
14.	11.8 MC.	30 MMF	One F.M. Ant. Term.	S.W.	11.8 MC.	S.W. Oscill- ator Core	5825 KC. Above
15.	10.7 MC.	30 MMF	One F.M. Ant. Term.	S.W.	10.7 MC. & Sec. Padder	S.W. Ant. Prl. & Sec. Padder	
16.	10.7 MC.	30 MMF	One F.M. Ant. Term.	F.M.	10.7 MC. (10.7 MC.)	S.W. Primary (Trap)	Adjust for Null Point
17.	535 KC.	30 MMF	Hi. Side of Dumny Loop	B.C.	Closed	B.C. Oscill- ator Series Padder	5825 KC. Above
18.	1620 KC.	30 MMF	Hi. Side of Dumny Loop	B.C.	Open	B.C. Oscill- ator Core	5825 KC. Above
19.	1400 KC.	30 MMF	Hi. Side of Dumny Loop	B.C.	1400 KC.	B.C. Antenna Trimmer	
20.	600 KC.	30 MMF	Hi. Side of Dumny Loop	B.C.	600 KC.	B.C. Antenna Core	First Model is Only. Dumited in Later Mod.
21.	5825 KC.	30 MMF	Hi. Side of Dumny Loop	B.C.	1400 KC.	B.C. Wave Trap Trimmer	Adjust for Null Point

## CHANNEL NUMBERS TO MEGACYCLES

Cross index between channel calibrations on the dial and frequency in megacycles follow:

Channel No.	Frequency in Megacycles
200	87.9
205	88.9
210	89.9
215	90.9
220	91.9
225	92.9
230	93.9
235	94.9
240	95.9
245	96.9
250	97.9
255	98.9
260	99.9
265	100.9
270	101.9
275	102.9
280	103.9
285	104.9
290	105.9
295	106.9
300	107.9

To find the frequency in megacycles for CHANNEL NUMBERS between those given above, add .2 megacycles for every one added to the CHANNEL NUMBER; for example Channel 204 would be 88.7 megacycles and 251 would be 98.1 megacycles.