

## Rogers - Majestic R210

### ADJUSTMENT OF DIAL POINTER

1. Set the tuning condenser in the fully closed position.
2. Loosen the screw securing the cord to the top drum.
3. Hold the tuning condenser closed and adjust the top drum until the screw is in the position shown on the diagram, then tighten the screw.
4. Loosen the Allen head set screw securing the top drum to the pointer bushing.
5. Hold the top drum in the above position (3) and rotate the rear end of the pointer and bushing until the center of the pointer is in line with the alignment mark at the low frequency end of the dial.
6. Tighten the Allen head set screw.

## SPECIFICATIONS

Model R210 is a Radio-Phonograph combination consisting of a 5-tube superheterodyne radio receiver and an automatic record changer. This model is designed in two versions; 115 volts 25 cycles and 115 volts 60 cycles.

### TUBES:

12BE6 Pentagrid Converter  
 12BA6 I.F. Amplifier  
 12AT6 2nd Detector, AVC and 1st Audio Amplifier  
 50C5 Audio Output  
 35W4 Rectifier

**TUNING RANGE:** 540 kc. to 1650 kc.

**INTERMEDIATE FREQUENCY:** 455 kc.

**AUDIO OUTPUT:** 1 watt undistorted.

**ANTENNA:** Built-in loop antenna with a connection for an outside antenna and ground.

**CURRENT DRAIN:** .55 ampere.

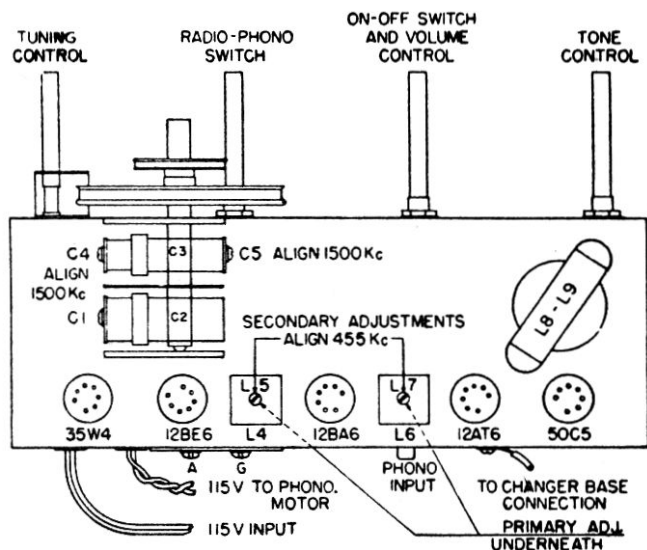
**TONE CONTROL:** The correct operation of the Tone Control is as follows: With the control shaft in the full counterclockwise position, there is no tone compensation introduced for either bass or treble. As the control is rotated clockwise the bass only is boosted until the mid position is reached. From the mid position to full clockwise the bass remains boosted and the treble is attenuated.

**PHONOGRAPH:** The record changer unit is a G.I. Model 700F-33-45 utilizing an Astatic crystal pickup cartridge No. LT3D. The turntable is rotated by either a 115 volt, 25 or 60 cycle motor, depending upon the frequency of the power source. For service data on the record changer refer to the General Instruments Model 700F-33-45 Record Changer Service Manual.

### TUBE SOCKET VOLTAGES

Pin	12BE6	12BA6	12AT6	50C5	35W4
1	—	—	—	6.8	0
2	0	0	0	—	—
3	36 AC	24 AC	0	36 AC	117 AC
4	24 AC	12 AC	12 AC	84 AC	84 AC
5	100	100	—	—	107 AC
6	100	28	—	100	90 AC
7	—	0	48	115	122

All voltages measured to B— with a 20,000 ohms per volt meter, with no input signal applied. All voltages are DC positive except where noted. Test voltage=117 volts, 25/60 cycles. Due to line voltage fluctuations, the readings may vary  $\pm 10\%$ .



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## TO REMOVE CHASSIS AND BAFFLE ASSEMBLY

1. Disconnect plug from AC line socket.
2. Remove antenna and ground connections.
3. Remove back cover and disconnect antenna and ground lines from chassis.
4. Disconnect the signal, power and ground connections between chassis and record changer.
5. Disconnect loop antenna leads.
6. Loosen two clamps on cabinet which secure the chassis wires.
7. Remove six screws holding baffle to cabinet so that the chassis and baffle may be removed as a unit.
8. Loop may be removed for alignment purposes by removing two wood screws.

## ALIGNMENT OF RECEIVER

### EQUIPMENT REQUIRED

**Signal Generator:** Capable of supplying modulated frequencies from 450 kc. to 1700 kc.

**Output Indicator:** A power output meter or a high resistance AC voltmeter.

**Line Isolating Transformer:** A 115 volt, 25/60 cycle, 1 to 1 ratio transformer.

### ALIGNMENT PROCEDURE AND EQUIPMENT CONNECTIONS

**Signal Generator:** Allow a sufficient length of time after the generator has been turned on for it to become thermally stable before making any tests. Always be sure to use the specified capacitor in series with the output lead connections as listed on the alignment procedure chart. Connect the return lead of the signal generator to the B— (center shield of the 12BA6 I.F. tube socket) of the receiver through a .05 mf. condenser.

**Line Isolating Transformer:** Do not connect a grounded lead to the B— unless a line isolating transformer is used.

**Output indicator:** If a power output meter is used adjust it for 4 ohms impedance and connect it in place of the speaker voice coil. Keep the output indicator below 500 milliwatts. If an AC voltmeter is used, connect it across the voice coil of the speaker. Never permit the output indication to exceed 1.3 volts during alignment. When the output indication increases, regulate the signal generator attenuator to keep the output below the above limits.

**Receiver:** Turn the volume control to the maximum (full clockwise) position. With the gang tuning condenser fully closed, adjust the dial pointer to the left hand end of the dial calibration. See paragraph re "Adjustment of dial cord." The loop antenna **must** be connected to the chassis during all alignment.

## ALIGNMENT PROCEDURE CHART

Operation Steps	SIGNAL GENERATOR		RECEIVER		
	Connections to Receiver	Frequency	Tuning Capacitor	See Notes	Adjust in Stated Order for Maximum Output
1	To pin 1 of 12BA6 through .05 mf. capacitor	455 kc.	Min.		2nd I.F. Transformer L7-L6
2	To stator of C1 through .05 mf. capacitor	455 kc.	"	A	1st I.F. Transformer L5-L4
3	To antenna connection through 100 mmf. capacitor *	1500 kc.	1500 kc.	B	Oscillator Trimmers C4-C5
4	To antenna connection through 100 mmf. capacitor *	1500 kc.	1500 kc.	C	Antenna Trimmer C1

\*or a standard dummy antenna with a 200 mmf. capacitor in series.

NOTE A: After completing operation No. 2, carefully readjust L7 and L6

NOTE B: C4 and C5 are in parallel. Adjusting C4 should be sufficient

NOTE C: After receiver and loop antenna have been replaced in the cabinet, connect the twisted antenna and ground connection of the back cover to the receiver and adjust C1 for maximum signal at 1500 kc.