

# ALIGNMENT PROCEDURE AND EQUIPMENT CONNECTIONS

**Output Indicator:** If a power output meter is used, adjust it for 4  $\Omega$  impedance and connect it across the secondary of the output transformer in place of the speaker voice coil. If an a.c. voltmeter is used, connect it across the speaker voice coil leads.

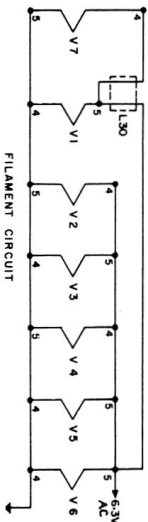
At no time during alignment should the output exceed 500 milliwatts or 1.4 volts rms.

When aligning FM circuits a d. c. voltmeter is connected as indicated in alignment chart.

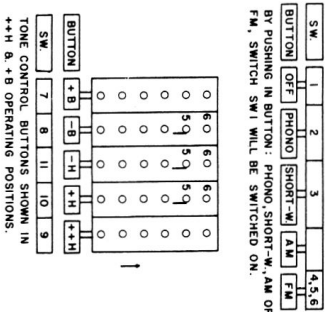
ALIGNMENT: Broadcast and Short Wave

SIGNAL GENERATOR COUPLING	FREQ.	BAND SWITCH	DIAL SETTING	INSTRUMENT	ADJUST	REMARKS
1. Direct connected via .05 coupling to pin 18 of switch #5	455 Kcs. 400 cps. Modulation 30%	Broadcast	1600 Kcs.	Output Meter 4 $\Omega$ load across output transformer or ac voltmeter across speaker terminals	L14, L15 L18, L19 for max.	Tone button in B-H+ position, Vol. control max.
2. Dummy Antenna connected via .05 coupling to AM antenna terminal.	455 Kcs. 400 cps. Modulation 30%	Broadcast	520 Kcs.	Output Meter 4 $\Omega$ load across speaker leads	L8, L9 for min.	Short out coil L6 Tone & Voltage as in 1. Adjust input to maintain readable indication on meter.
3. --	--	--	Set AM dial pointer to indication at left hand end of dial	--	--	--
4(a) Dummy Antenna connected via .05 coupling to AM antenna terminal	1500 Kcs. 400 cps. Modulation 30%	Broadcast	1500 Kcs.	As in 1	C6 for max.	Short L5 & L6. Repeat 4a and 4b until frequency coincides with that indicated on dial. Remove L5 & L6 short.
4(b) As in 2	550 Kcs 400 cps Mod. 30%	Broadcast	550 Kcs	As in 1	L11 for max.	
5 As in 2	1500 Kcs 400 cps Mod. 30%	Broadcast	1500 Kcs	As in 1	C5 for max.	
6(a) As in 2	11.73mcs.	Shortwave	11.73mcs.	As in 1	C14 for	Repeat 6(a) & 6(b) until frequency is correct as indicated on dial
6(b) As in 2	6.02mcs.	Shortwave	6.02mcs.	As in 1	L34, L35 for max.	
7(a) As in 2	11.73mcs.	Shortwave	11.73mcs.	As in 1	C13 for max.	Repeat 7(a) & 7 (b) until no further improvement in gain results.
7(b) As in 2	6.02mcs.	Shortwave	6.02mcs.	As in 1	L32, L33 for max.	

# Philips B4C87A / Rogers Majestic RG5050



RESISTOR VALUES: K = 1,000, M = 1,000,000 OHMS.  $\frac{1}{2}$ W UNLESS OTHERWISE STATED  
CAPACITOR VALUES:  $\mu$  = SHOWN IN  $\mu$ F, \* = SHOWN IN  $\mu$ F.



## FM ALIGNMENT INSTRUCTIONS

8(a) FM Signal Generator connected across antenna terminals via 150 $\Omega$ in ground side of generator to give 300 $\Omega$ balanced input.	108 mc 15 Kcs. deviation 400 cps	FM	108 mc.	As in 1	Sensitivity 80 $\mu$ V	Check that dial setting does not deviate from actual freq. by more than 1300 Kcs. If Freq. does not fall within limits adjust C11T.
8(b) As in 8 (a)	87.5 mc.	FM	87.5 mc.	As in 1	Sensitivity 80 $\mu$ V	As in 8 (a)
9. Generator direct connected to TPI	10.7 mcs no model.	FM	108 mcs.	VTVM dc connected (see remark as to loc.)	1.0 for max. L22-L23 VTVM between junction of 220K and top of volume control for adjustment of L20 connect VTVM across C40 and adjust for max. negative voltage. Remove 2 resistors after adjustment.	Connect 2 resistors of 220 K (1%) in series across C40. Connect VTVM between junction of 220K and top of volume control for adjustment of L20 connect VTVM across C40 and adjust for max. negative voltage. Remove 2 resistors after adjustment.
10. As in 9	10.7 mcs	FM	108 mcs	VTVM dc connected across C40	L12, L13, L28, L7T for max.	
RF ALIGNMENT INSTRUCTIONS						
11. Direct connected to FM antenna terminals	10.7 mcs	FM	108 mcs	VTVM dc connected across C40	Adjust C14T for min. response	Maintain high enough input signal to give readable indication on meter.
12. Balanced 300 $\Omega$ input to FM antenna terminals	108 mcs	FM	108 mcs	As in 10	Adjust C15T and C11T for max.	