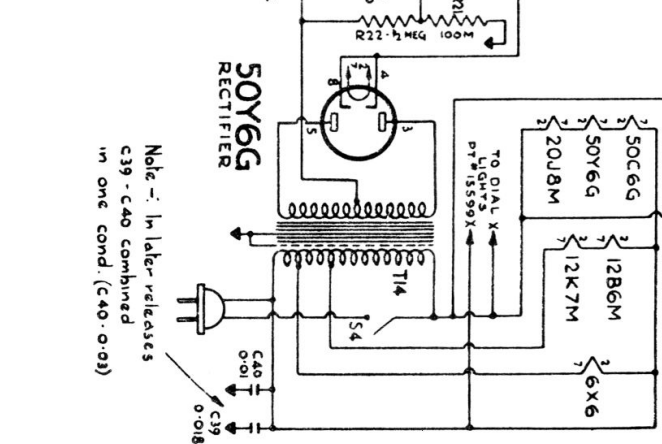
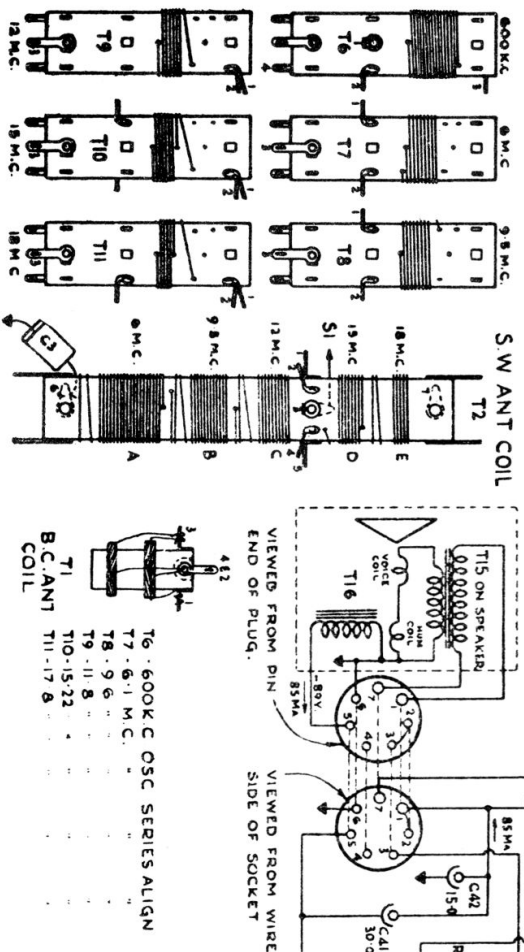
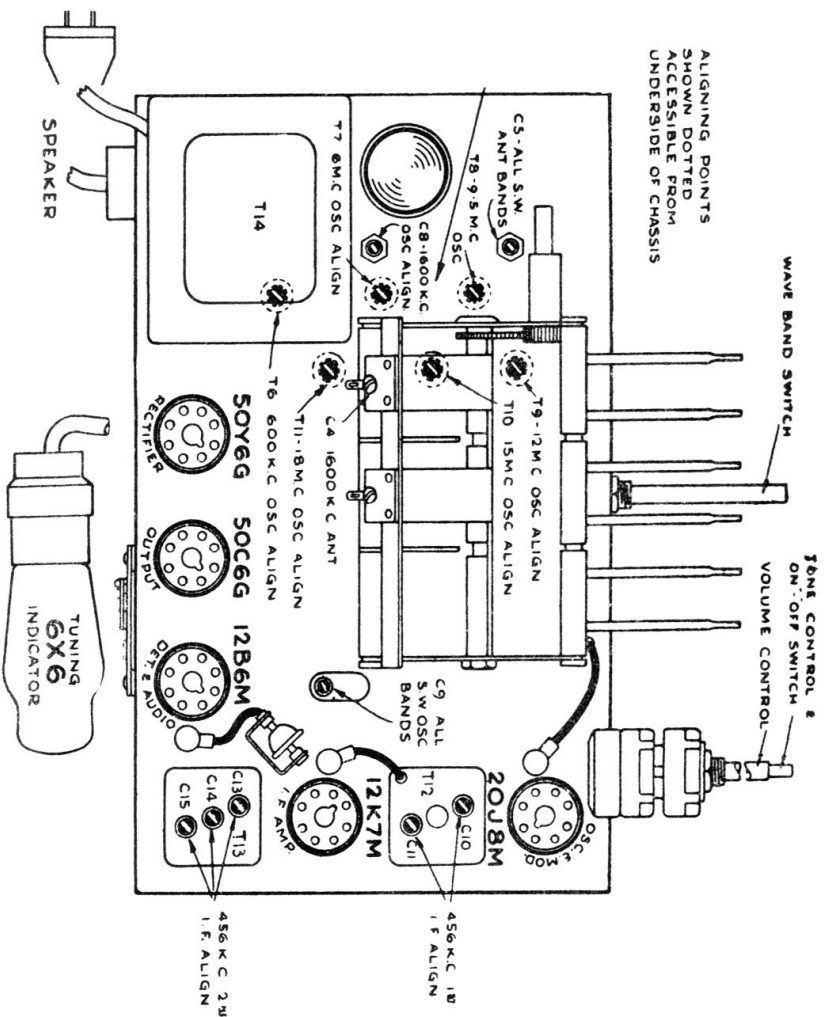


Note: ALL WAVE CHANGE SWITCHES ARE SHOWN IN BROADCAST BAND POSITION & VIEWED FROM REAR OF CHASSIS WITH CHASSIS INVERTED - SWITCH SECTION "A" IS REAR OF WAFER - SWITCH SECTION "B" IS FRONT OF WAFER. (TRANSPARENT VIEW.)

\* VALUES OF RESISTANCE IN CIRCUIT DO NOT PERMIT OF ACCURATE VOLTAGE CHECK. USE PLATE CURRENT AS INDICATION OF PRESENCE OF CORRECT GRID & PLATE VOLTAGE. VOLTAGE READINGS ARE BETWEEN POINTS SHOWN & CHASSIS (GROUND) UNLESS OTHERWISE INDICATED.

Rogers 15-55A, 15-67  
Majestic 4155A, 4167  
Majestic "Canopus" "Cambria"  
(Chassis 10R591, 10R691)





## I. F. AND BROADCAST BAND

Operation	Connect Generator	Set Generator Tuning	Set Receiver Tuning	Dummy Antenna	Volume Control	Adjust	Remarks
1	To Grid Gap of 20J8M	456 kc/s.	700-800 kc/s.	.01 mfd.	Max.	C10, C11, C13, C14, C15,	To Peak I.F.
2	To Antenna	1600 kc/s.	1600 kc/s.	.0002 mfd.	Max.	C8	To Peak Osc.
3	To Antenna	1600 kc/s.	1600 kc/s.	.0002 mfd.	Max.	C4	To Peak Ant.
4	To Antenna	600 kc/s.	600 kc/s.	.0002 mfd.	Max.	T6*	To Track Osc.
5	To Antenna	1600 kc/s.	1600 kc/s.	.0002 mfd.	Max.	C8, C4	Recheck Adj.

**NOTE:**—Always use an output meter or other visual indicator when making alignment. Use only enough generator output to give readable value on output indicator.

\*Rock tuning control during this adjustment. Always ground generator and receiver (chassis) connection.

The logging limit in the broadcast band is a deviation in calibration of not more than 1% of the frequency at the point of check. As a rule, adjustment should be for maximum sensitivity at aligning points without compromise between logging and sensitivity. The tuning indicator will assist in indicating maximum alignment.

## SHORT-WAVE SPREAD-BAND

591 - 691 CHASSIS

Of the seven adjustments provided for the short-wave channels, two (identified by the symbols C5 and C9) affect simultaneously all the short-wave bands.

Adjustment of C9 is for the purpose of correcting logging, and in practice it will be found that this is best done by setting the dial pointer to the mid-point of the 18 mc. scale, adjusting C9 to some arbitrary value (about half capacity), then adjusting the logging of each of the short-wave bands by means of the movable cores T7, T8, T9, T10 and T11. Return the set to the 18 mc. band and adjust the antenna (C5) for maximum sensitivity.

Adjustment of C9 is for the purpose of correcting logging, and in practice it will be found that this is best done by setting the dial pointer to the mid-section of the 18 mc. scale, adjusting C9 to some arbitrary value (about half capacity), then adjusting the logging of each of the short-wave bands by means of the movable cores T7, T8, etc. Return the set to the 18 mc. band and adjust the antenna (C5) and interstage (C7) to maximum sensitivity.

# Rogers 15-55A, 15-67 Majestic 4155A, 4167 De Forest "Canopus" "Cambria"

(Chassis 10R591, 10R691, 10M591, 10M691, 10D591, 10D691)

591, 691, 792 CHASSIS

Re-adjustment of C9, C5 (and C7 in the 10M792) will be necessary whenever circuit characteristics are altered, such as by the replacement of a tube.

Re-adjustment of the movable cores of the oscillator coils T7, T8, T9, T10 and T11 will be required whenever servicing of the receiver necessitates replacement of an oscillator coil, band switch section or wiring associated with the oscillator circuit.

The most satisfactory method of aligning and checking the spread-band ranges is through the use of actual short-wave stations of known frequencies, which are tuned to in a specific receiver band and deviations from calibrations noted.

Aligning points for the oscillator stages at short-waves are approximately 6.1, 9.6, 11.8, 15.2 and 17.8 megacycles. Minor deviations from these points will not materially affect the accuracy of adjustment.

The alignment of the antenna and interstages (R, F) is made for all bands at one point only. By choice, this may be either at some particular band in which the user is especially interested (to ensure maximum sensitivity), but preferably on the 18 mc. band. This automatically provides maximum sensitivity in the middle of all other short-wave bands.

Before attempting complete re-alignment, always consider whether this adjustment is necessary. Possibly the desired improvement can be achieved by a minor adjustment of C9, C7 (10M792 only) and C5. This latter usually suffices other than when coils, condenser, wiring or switches, in the R. F. unit have been changed.

In the foregoing has been described the functions of the various spread-band adjustments. Permissible deviation (in fractional inches) from scale calibration at aligning points is shown. To provide direction on the actual adjustment, the following procedure is given:

Operation	Connect Generator	Generator Tuning *	Receiver Tuning	Dummy Antenna	Adjust	Lineal Deviation
1	Antenna	17.8 mc/s.	17.8 mc/s.	400 ohms	C7	+ 1/8"
2	Antenna	6.8 mc/s.	6.1 mc/s.	400 ohms	T7	+ 1/8"
3	Antenna	9.5 mc/s.	9.6 mc/s.	400 ohms	T8	+ 1/8"
4	Antenna	11.8 mc/s.	11.8 mc/s.	400 ohms	T9	+ 1/8"
5	Antenna	15.2 mc/s.	15.2 mc/s.	400 ohms	T10	+ 1/8"
6	Antenna	17.8 mc/s.	17.8 mc/s.	400 ohms	T11	+ 1/8"
7	Antenna	For maximum sensitivity in the middle of the 18 mc. band.		400 ohms	C7 (10M792 only)	
8	Antenna			400 ohms	C5	

**NOTE:**—Use only a visual output indicator during alignment. Keep the generator output low—only sufficient to give a readable indication. The dummy antenna must be non-inductive, preferably that using isolantite sleeve and metal ends.

\*Stabilize the generator before using by allowing it to operate until it stops drifting. Check its calibration against known stations at or near the aligning frequencies shown.