

Sears, Roebuck and Co. Chassis 132.877, Catalog Nos. 18 and 20.

AM ALIGNMENT

Position	Generator	Dummy	Generator	Generator	Adjust Trimmer	Trimmer				
of	Frequency	Ant.	Connection	Connection	In Order Shown	Function				
Variable			(high)	Ground Lead	For Max. Output					
Open	455 Kc	.05 mfd.	Mixer Grid	Chassis	A1, A2, A3, A4,	I.F.				
Open	1650 Kc		eTest Loop	Test Loop	A5	Oscillator				
1400 Kc	1400 Kc		eTest Loop	Test Loop	A6	Antenna				
° 600 Kc	600 Kc		^e Test Loop	Test Loop	Check Point	Antenna				

* Connect generator lead to a Standard Hazeltine Test Loop, Model 1150, placed two feet from the set loop, or three turns of wire about six inches in diameter, placed about one foot from the set loop. Or the generator can be connected with the high side lead to the AM antenna screw terminal and the ground lead to the chassis.

** With a generator signal of 600 Kc, tune the set to the point where maximum output is obtained, which should be approximately 600 Kc on the dial. Adjust antenna section places of variable for maximum output.

FM ALIGNMENT

Detector and I.F. alignment using Signal Generator and Oscilloscope.

1. Connect FM Generator, High side, to grid (pin 1) of 6BA6 2nd I.F. tube through .005 mfd. dummy.

2. Set generator frequency to 10.7 Mc. modulated either 60 cycles or 400 cycles, 250 Kc sweep (125 Kc. deviation).

- Connect vertical input of scope across volume control of receiver (grounded terminal to chassis, ungrounded terminal to
- high side of control). Set scope switch for internal synchronization and set horizontal oscillator to 2X frequency of modulating voltage of

- generator. (120 or 800 cycles)
 Turn variable condenser fully open, and band switch to right (FM).
 Adjust frequency vernier of horizontal oscillator on scope until the pattern becomes stationary.
- Adjust ratio detector primary slug No. A7 for maximum vertical sweep of the scope pattern.

 Adjust ratio detector secondary slug No. A8 to center the cross over point of the pattern. Pattern should look like Fig. 1. with the same amount of curve on both ends, and the cross over point in the center.
- Connect generator, high side, to center antenna screw terminal on bottom of chassis.
- 10. Adjust I.F. slugs A9, A10 and All for the greatest vertical sweep of the pattern, consistent with linearity. If the I.F. slugs are adjusted for maximum sweep of the pattern, the pattern may become non-linear. Therefore, adjustment should be made for the greatest sweep which can be obtained and still have all four ends of the "X" pattern similar in size and shape.
- 11. Check the alignment of the I.F. and detector circuits by varying the signal generator frequency above and below the center frequency of 10.7 Mc. If the receiver is perfectly aligned, two smaller "X" patterns of similar size and shape will result, one on either side of the center frequency. See Figure 2.

CENTER FREQUENCY	CENTER FREQUENCY			
FIG 1	FIG 2			

X PATTERN

SMALL X PAT TERM

ABOVE AND BELOW

Generator Frequency	Dummy Ant.	Generator Connection High Side	Generator Connection Ground Lead Ground (C)	Adjust Trimmers In Order Shown	Trimmer Function
108.5 Mc.	*300 ohm	Terminal	Terminal	A12	Oscillator
87.5 Mc.	e300 ohm	Ant. (FM) Terminal	Ground (G) Terminal	Check Point	Oscillator
105 Mc.	*300 ohm	Ant. (FM) Terminal	Ground (G) Terminal	A13	R.F.
91 Mc.	*300 ohm	Ant. (FM) Terminal	Ground (G) Terminal	Check Point	R.F.
	Frequency 108.5 Mc. 87.5 Mc. 105 Mc.	Frequency Ant. 108.5 Mc. *300 ohm 87.5 Mc. *300 ohm 105 Mc. *300 ohm	Connection Frequency Ant. High Side Ant. (FM)	Generator Frequency Ant. 108.5 Mc. 300 ohm 105 Mc. 300 ohm Terminal 105 Mc. 300 ohm Terminal Ant. Terminal Ground (C) Terminal Ant. Terminal Ground (C) Terminal Ground (C) Terminal Ground (C)	Generator Frequency Ant. 108.5 Mc. *300 ohm 105 Mc. *300 ohm Terminal 105 Mc. *300 ohm Terminal Ant. (FM) Terminal Terminal Ant. (FM) Terminal Terminal Ant. (FM) Terminal Terminal Ant. (FM) Terminal Terminal

RF

For R.F. alignment use FM generator signal modulated with 400 cycles 45 Kc. sweep (22.5 Kc.) deviation). The 300 ohm dummy should be made up to two 150 ohm resistors, one placed in each lead at the receiver antenna terminals

