GENERAL ELECTRIC

MODEL 218

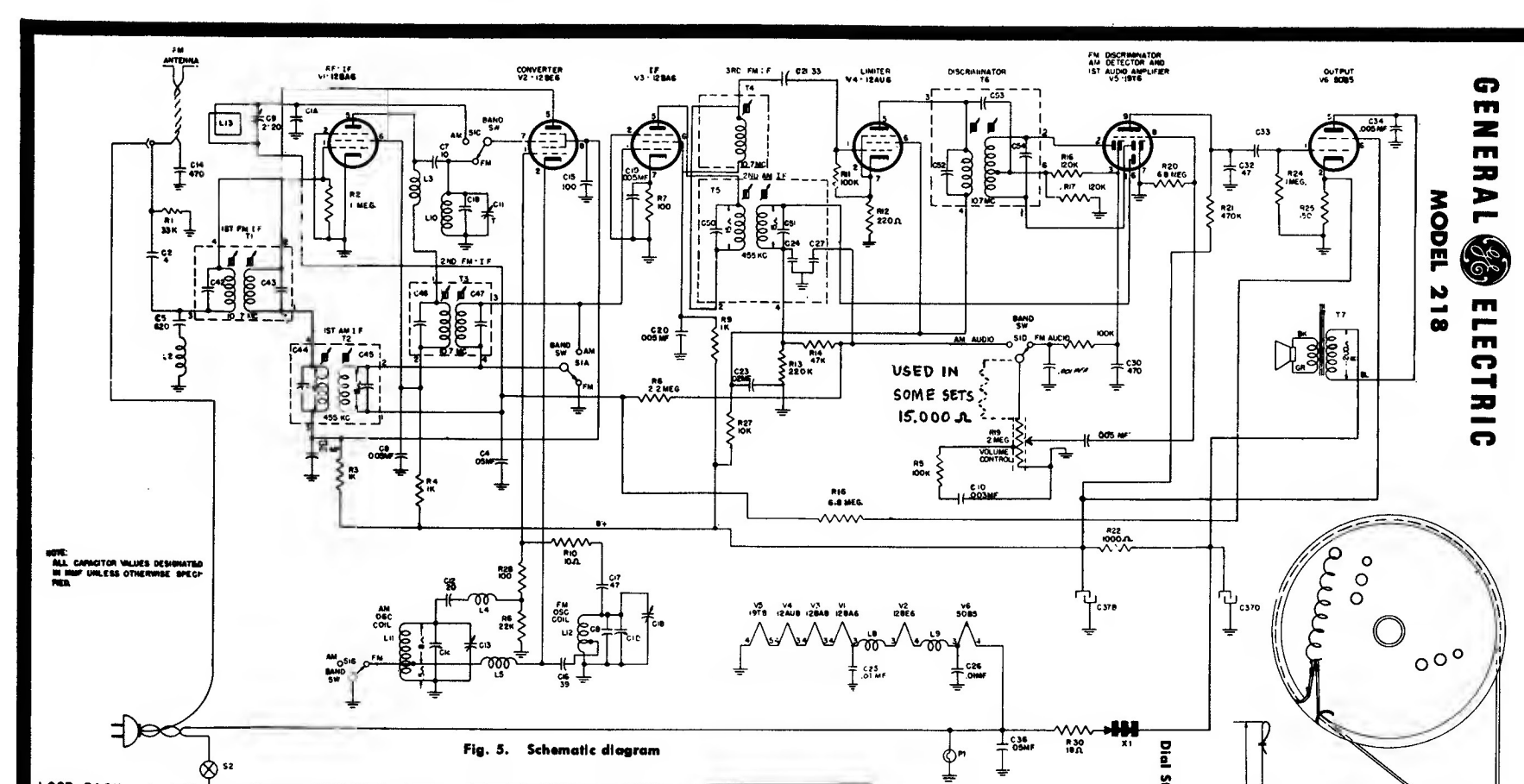

Fig. 5. Schematic diagram

Fig. 3. Dial Stringing Diagram

Fig. 1. Tube and Trimmer Location

Fig. 2. I-F and Discriminator Curves

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ALIGNMENT

EQUIPMENT NECESSARY FOR METER ALIGNMENT

1. Signal generator G-E YGS-3, or equivalent.
2. 20,000 ohm-per-volt meter.
3. Output meter.
4. .01 mfd. capacitor.
5. Four-turn, six-inch diameter loop of bell wire for AM, r-f and oscillator alignment.
6. Isolation transformer.

NOTES FOR METER ALIGNMENT

1. Connect a 20,000 ohm-per-volt meter from junction of C29 and R18 to chassis. Use a ten-volt scale for steps 3, 4 and 5.

2. Connect a 20,000 ohm-per-volt meter from the grid of the limiter (pin 1 of V4) to cathode of limiter (pins 2 or 7 of V4) in series with a 200,000-ohm resistor. The resistor must be connected directly to the grid pin to minimize capacity loading and to isolate the i-f signal voltage from the meter. Keep signal generator down so that the meter does not indicate more than one volt at the grid (5 microamps through 200,000 ohms).

3. Connect a standard output meter across the speaker voice coil. Turn volume control full on. Keep signal generator output low so that output meter indicates not more than ½ watt during alignment.

4. Align the AM oscillator trimmer (C13) and the AM r-f trimmer (C9) by coupling the signal to the loop antenna inductively. Connect a four-turn, six-inch diameter loop of bell wire across the signal generator output terminals, and locate the loop about one foot from the radio loop antenna. The position of the loop in respect to the radio loop antenna should not be changed during any one set of adjustments to prevent possible errors in the peak readings.

5. Disconnect the copper strap from the band switch to pin 7 of the 12BE6 to align the 1st FM i-f transformer. Unsolder the strap from the tube pin connection. Resolder the strap after T1 is aligned to 10.7 mc as in step 8.

6. The AM r-f alignment should be made before the FM r-f alignment. With the gang condenser fully closed, the pointer should point to the dot on the dial scale after the letters "FM" on the left end of the dial scale.

7. The termination impedance of the signal generator should be 300 ohms for FM r-f alignment.

MODEL 218 "H" VERSION

It is the same as the Model 218 except that the local oscillator is designed to operate on the high side of the incoming signal on FM reception. This change reduces the possibility of local oscillator radiation interfering with television reception.

METER ALIGNMENT CHART

Step	Signal Generator Frequency	Signal Input Point	Band Switch Setting	Dial Setting	Adjust	See Note
			AM I-F ALIGNMENT			
1	455 kc modulated with 400 cps	12BE6 grid (pin 7 of V2) thru .01 mfd.	AM	550 kc	Secondary and primary slugs of T5 for maximum.	3
2					Secondary and primary slugs of T2 for maximum.	
			FM DISCRIMINATOR AND I-F ALIGNMENT			
3	10.7 unmodulated	12BA6 grid (pin 1 of V3) thru 0.1 mfd.	FM		Adjust T6 secondary for zero. Apply 1 volt signal input.	1
4	See adjust col.				Detune signal generator to point of maximum meter reading.	
5	Same freq. as in step 4				Adjust T6 primary for maximum meter reading.	
6	10.7 mc unmodulated	12BA6 grid (pin 1 of V1) thru .01 mfd.			Adjust slug of T4 for maximum.	2
7					Adjust secondary and primary slugs of T3 for maximum.	
8		12BE6 grid (pin 7 of V2) thru .01 mfd. and 4700 ohms. See note 5.			Adjust secondary and primary slugs of T1 for maximum.	2, 5
			AM R-F ALIGNMENT			
9	1500 kc AM modulated with 400 cps	Inductively coupled. See note 4.	AM	1500 kc	Adjust C13 for maximum.	3, 4, 6.
10					Adjust C9 for maximum while rocking dial.	
			FM R-F ALIGNMENT			
11	108 mc unmodulated	Dipole terminals	FM	108 mc	Adjust C18 for maximum.	2, 6, 7.
12	98 mc unmodulated			For max. output	Adjust C11 for maximum while rocking dial.	