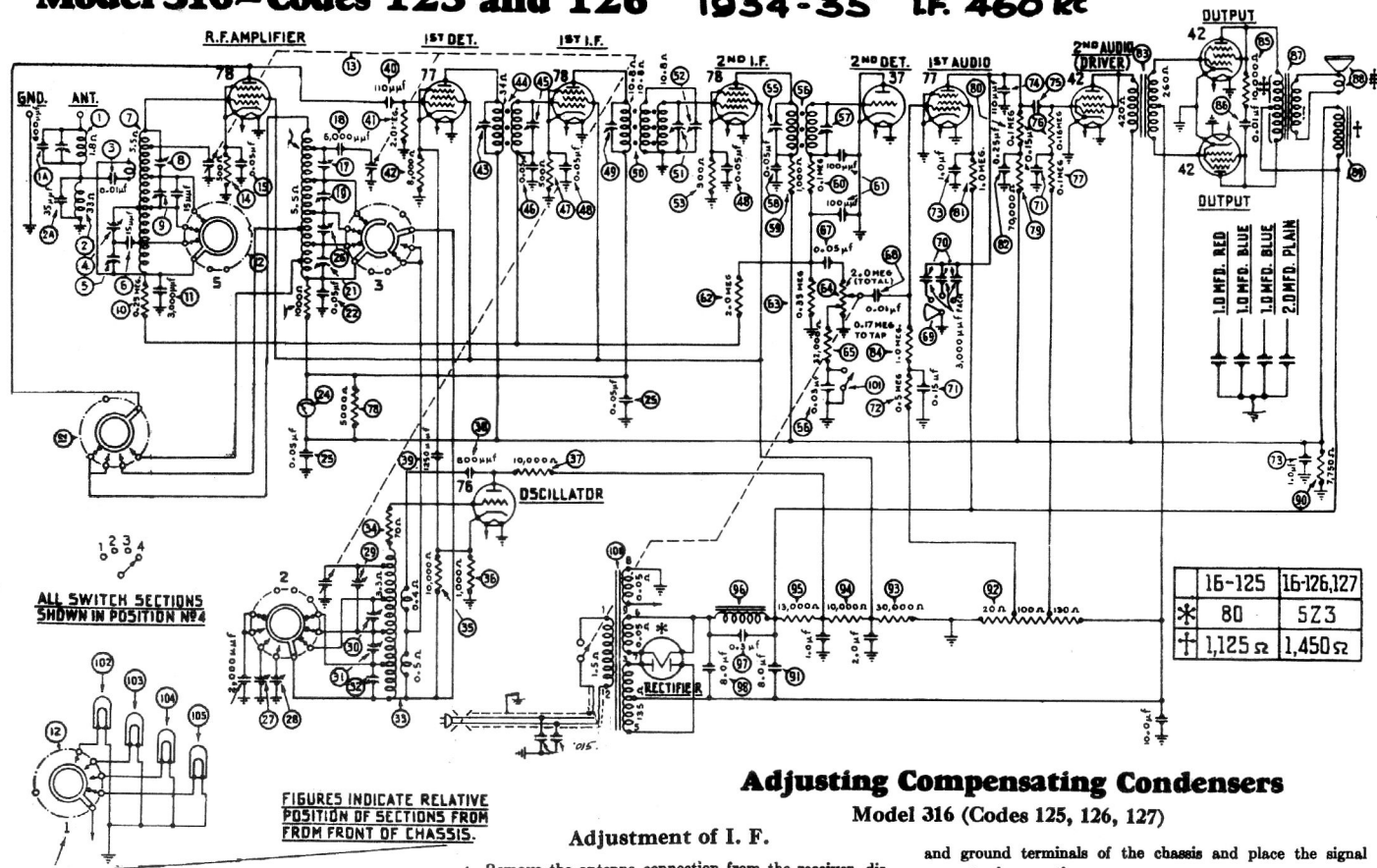


Model 316—Codes 125 and 126 1934-35 LF. 460 Kc



Adjusting Compensating Condensers

Model 316 (Codes 125, 126, 127)

Adjustment of I. F.

1. Remove the antenna connection from the receiver, disconnect the grid clip from the first detector (type 77 tube), and connect the "ANT" output terminal of the Model 048 or 024 signal generator to the grid cap of this tube; connect the "GND" terminal of the signal generator to the "GND" terminal of the receiver.

2. Connect the 0 to 20 volt range of the output meter in the Model 048 or 025 tester to the plate prongs of the two output tubes or to the two bottom prongs of the speaker plug.

3. Adjust the signal generator to a frequency of 460 K.C. Place the receiver in operation with the dial turned to the low frequency end of the broadcast band, wave band switch to extreme left, and with the volume control adjusted near its maximum setting. Adjust the signal generator attenuator for approximately half-scale reading of the output meter.

4. Using the Philco fibre adjusting screw driver, part No. 27-7059, adjust the I. F. compensating condensers in the following order to give maximum reading in the output meter: ⑥, ④, ②, ①, ③, ⑤. (Fig. 4).

Adjustment of Wave-Trap

1. Connect the signal generator leads to the antenna and ground terminals of the receiver. Replace the grid clip on the first detector grid cap.

2. Set the wave-band switch of the receiver to the extreme left (broadcast position) (Range No. 1, 550-1500 K.C.), and turn the station selector to 550 K.C.

3. With the signal generator in operation at 460 K.C., adjust the wave-trap ① condenser until a minimum reading is obtained on the output meter. The Philco fibre wrench, part No. 3164, is used for this adjustment.

Adjustment of High Frequency Padders

1. Leaving the output meter connected to the receiver connect the Philco Model 091 signal generator to the antenna

and ground terminals of the chassis and place the signal generator in operation.

2. Turn the wave-band switch to Range 4 (extreme right) and adjust the station selector to 18.0 megacycles, at which point the fifth harmonic of the 3600 K.C. signal will be heard. By means of the Philco paddler wrench, part No. 3164, adjust the oscillator, R.F. and antenna padders for maximum reading in the output meter and in the order mentioned. These padders are numbered ⑩, ⑪ and ⑫, respectively in figure No. 4. To make certain that the adjustment has been correctly made check the sixth harmonic at 21.6 M.C. on the dial.

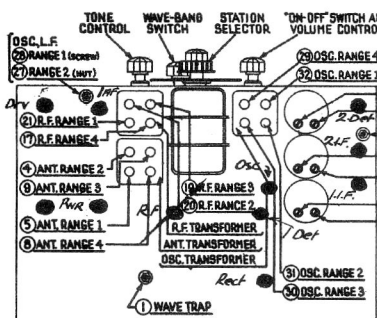
3. Turn the wave-band switch to Range 3 (4.1-10.0 M.C.) and adjust the tuning dial to 7.2 M.C. (the second harmonic of the 3600 K.C. signal). Adjust the oscillator, R.F. and antenna padders (⑩, ⑪ and ⑫) respectively for maximum output. Check the calibration of the dial at the upper portion of the third band by tuning in the image of the 10.8 M.C. signal at approximately 9.9 on the dial. (If there is an appreciable error in calibration at this point, readjust padder ⑩ for maximum output. Return the dial to the 7.2 M.C. position, tuning for maximum output. Readjust padders ⑪ and ⑫.)

4. Turn the wave-band switch to scale No. 2 (1.5-4.0 M.C.) and tune in the fundamental frequency from the signal generator at 3.6 M.C. Adjust padders ⑩, ⑪ and ⑫ for maximum output.

5. At this point it will again be necessary to make use of the broadcast type signal generator Models 024, 048 or equivalent. Connect the output of this signal generator to the antenna and ground terminals of the chassis. Turn the station selector dial to 1.5 M.C. (Range 2) and adjust the signal generator to the same frequency (1500 K.C.). Adjust padder ⑦ (nut).

6. Turn the wave-band switch to Range No. 1 (broadcast band) and set the dial at 1500 K.C. Adjust the signal generator to this frequency and adjust padders ⑩, ⑪ and ⑫ for maximum output.

7. Tune the receiver and the signal generator to 600 K.C. and adjust padder ⑥ (screw) for maximum output.



Line Voltage 115

Code 125	Tube Function	78 R.F.	77 1st Det.	76 Osc.	78 1st I.F.	78 2nd I.F.	37 2nd Det.	77 1st Aud.	42 Driver	42 Out-put
	Circuit									
	F to F.....	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	P to K.....	175	185	70	180	180	0	60	190	275 ea.
	SG to K.....	65	62	...	65	65	...	48	190	275 ea.
	K to Gnd.....	2.4	4.8	5.4	2.3	2.5	0	0	0	0

Code 126	Tube Function	78 R.F.	77 1st Det.	76 Osc.	78 1st I.F.	78 2nd I.F.	37 2nd Det.	77 1st Aud.	42 Driver	42 Out-put
	Circuit									
	F to F.....	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	P to K.....	210	220	75	215	215	0	70	215	330
	SG to K.....	75	70	...	75	80	...	56	215	330
	K to Gnd.....	2.8	5.8	6.1	2.8	3.3	0	0	0	0

DATA SHEET

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