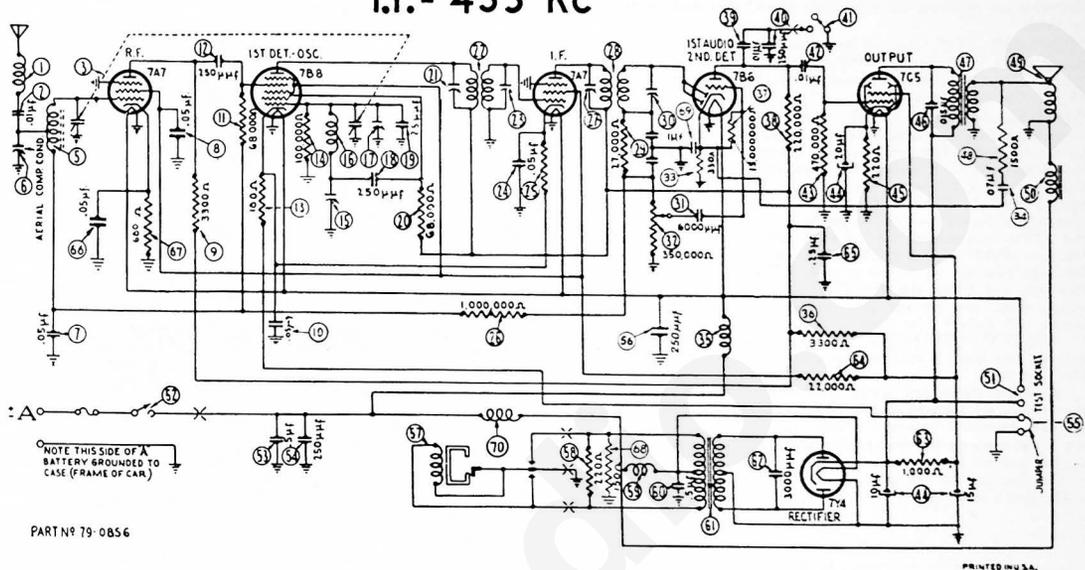


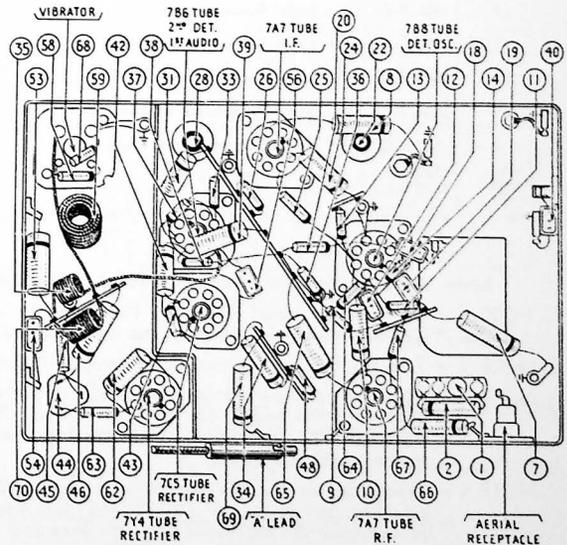
# MODEL AR-40

## I.F. = 455 KC



### PARTS LIST — AR-40

No.	Description	Part No.	No.	Description	Part No.	
1	Antenna Choke	65-0102	32	Resistor (220 ohms)	33-122436	
2	Condenser (.01 Mfd.)	61-0114	33	Condenser (.015 Mfd.)	61-0104	
3	Tuning Condenser	63-0047	34	Output Transformer	65-0419	
4	Antenna Transformer	65-0323	35	Resistor (1500 ohms)	33-215334	
5	Aerial Compensator	77-0545	36	Replacement Cone	91-0209	
6	Condenser (.05 Mfd.)	61-0101	37	(For 73-0059-4 Speaker)	91-0209	
7	Condenser (.05 Mfd.)	61-0101	38	(For 73-0059-9 Speaker)	91-0213	
8	Resistor (3300 ohms)	33-233334	39	Field Coil	Not Replaceable	
9	Condenser (.05 Mfd.)	61-0101	40	Test Socket	55-1118	
10	Resistor (68,000 ohms)	33-368154	41	On-Off Switch	83-0112	
11	Condenser (250 Mmfd.)	60-125157	42	Condenser (.5 Mfd.)	61-0106	
12	Resistor (180 ohms)	33-118336	43	Condenser (250 Mmfd.)	60-125157	
13	Resistor (100,000 ohms)	33-410154	44	Test Link	57-1121	
14	Low Frequency Ladder	63-0048	45	Condenser (250 Mmfd.)	60-125157	
15	Oscillator Transformer	65-0420	46	Vibrator	83-0025	
16	Oscillator Padder (on Tun. Cond.)	60-025337	47	Resistor (220 ohms)	33-122334	
17	Condenser (68,000 ohms)	33-368334	48	Vibrator Choke	65-0075	
18	Padder (Pri. 1st I. F. Trans.)	65-0420	49	Condenser (.5 Mfd.)	61-0137	
19	First I. F. Transformer	65-0319	50	Power Transformer	65-0318	
20	Padder (Sec. 1st I. F. Trans.)	61-0101	51	Condenser (3000 Mmfd.)	61-0113	
21	Condenser (.05 Mfd.)	61-0101	52	Resistor (1000 ohms)	33-210434	
22	Resistor (470 ohms)	33-147336	53	Resistor (22,000 ohms)	33-322434	
23	Resistor (1,000,000 ohms)	33-510154	54	Condenser (.25 Mfd.)	61-0125	
24	Padder (Pri. 2nd I. F. Trans.)	65-0320	55	Condenser (.05 Mfd.)	61-0101	
25	Resistor (27,000 ohms)	33-327154	56	Resistor (680 ohms)	33-168336	
26	Padder (Sec. 2nd I. F. Trans.)	61-0155	57	Resistor (150 ohms)	33-115334	
27	Volume Control	67-0043	58	Condenser (.1 Mfd.)	61-0152	
28	Resistor (330 ohms)	33-133334	59	"A" Choke	65-0037	
29	Condenser (.07 Mfd.)	61-0152	60	Radio Housing	77-0751F C51	
30	Filament Choke	65-0452	61	Control Assembly	55-0134	
31	Resistor (3300 ohms)	33-233334	62	Dial	55-1194	
32	Resistor (15,000,000 ohms)	33-815154	63	Drive Cord	55-0935	
33	Resistor (220,000 ohms)	33-422334	64	Drive Cord Spring	57-1425FA3	
34	Condenser (.25 Mmfd.)	60-125157	65	Tuning Shaft	57-1385	
35	Tone Control Switch Wafer	77-0831	66	Volume Shaft	57-1384	
36	Condenser (.01 Mfd.)	61-0120	67	Pointer	57-1889PCP	
37	Resistor (470,000 ohms)	33-471514	68	Tone Control Lead	95-0135	
38	Filter Condenser	61-0089	69	Hook Bolt	(Radio Mtg.) 57-1340FA3	
					(Radio Mtg.) W166SFE7	
					Nut (Radio Mtg.) W3SFA3	
					Speaker Unit	73-0059
					Speaker Cover	87-1043FC51
					Wiring Slide Cover	57-1345FC51
					Interference Condenser	30-4007
					Distributor Resistor	33-1196
					Loktal Socket	55-0375
					Vibrator Socket	27-6153
					Vibrator Shaft Clamp	57-1429FA38



# MODEL AR-40 (CONTINUED)

## MODEL AR-40 — ADJUSTMENTS

All padding adjustments are carefully made at the factory and ordinarily no readjustments are necessary. However, when readjustments are required, the procedure given below must be followed in detail.

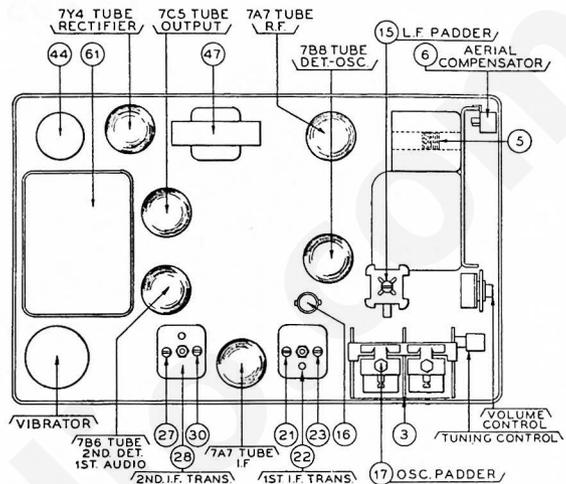
**EQUIPMENT**— Fully charged heavy duty storage battery or 6 volt power pack, 070 or 177 Philco Signal generator, 027 Philco Vacuum tube voltmeter and set tester or audio output meter, 45-2610 Padding screw driver.

**GENERAL—VACUUM TUBE VOLTMETER.** The Model 027 Vacuum tube voltmeter is an extremely sensitive and accurate test instrument and is recommended for use when aligning and adjusting auto radios. Connect the negative (—) terminal of the Vacuum Tube Voltmeter to the high side (ungrounded side) of the volume control. Connect the positive (+) terminal to the radio housing. Connect the "AC" cord to a 110 volt AC socket. Press the VTVM button and the 10 volt button. Turn the "Set Zero Ohms — VTVM" control clockwise until a click is heard. Allow the tubes to heat up for a few minutes. Short the 150 meg. VTVM terminals and adjust the "Set Zero ohms VTVM" control until the meter reads zero on the 0-10 range scale (green scale). The needle will deflect from right to left.

**AUDIO OUTPUT METER.** If an audio output meter is used, connect the leads across the voice coil of the speaker. Use the 0-30 volt scale.

With the Radio and signal generator set up for operation at the prescribed frequency, turn the Radio volume control on full and set the signal generator attenuator so that a half scale reading is obtained on the meter. The signal in the speaker should be audible but not loud.

The shielding on the generator output lead must be connected to the Radio housing.



OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
1		ADJUST THE AERIAL COMPENSATOR ⑥ TWO TURNS FROM TIGHT			
2	455 K.C.	To Aerial Receptacle on Radio	.1 Mfd.	Note 2	⑬ ⑭ ⑮ ⑯
3	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	⑰
4	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	④ Note 4
5	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	⑮ Note 3
6	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	⑰
7	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	④ Note 4
8	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	⑮ Note 3
9	1200 to 1400 K.C.	Note 5	Note 5	Note 5	⑥

Make all adjustments for maximum reading on the output meter.

**NOTE 1** — Connect the aerial lead, Part No. 95-0185, to the aerial receptacle in the radio. Connect a 10 Mmfd. Condenser in series between the signal generator and the aerial lead.

**NOTE 2** — Turn the condenser rotor plates completely out of mesh as far as they will go.

**NOTE 3** — Rock the tuning condenser while adjusting the low frequency padder. Tune the condenser to the signal and adjust the padder for maximum output. Rotate the tuning condenser back and forth slightly for maximum output. Then readjust the padder for maximum output. Repeat this procedure until no further improvement is noticed.

**NOTE 4** — When the aerial stage adjustment is made with the Radio installed in the car, the Radio aerial lead must be connected to the car aerial in the usual manner. Connect the signal generator output lead to a wire placed near the car aerial but not connected to it.

**NOTE 5** — When installing the radio in the car, follow the installation instructions carefully. Tune in a weak broadcast signal between 1200 and 1400 Kilocycles on the control scale. Adjust the aerial compensator ⑥ for maximum signal.