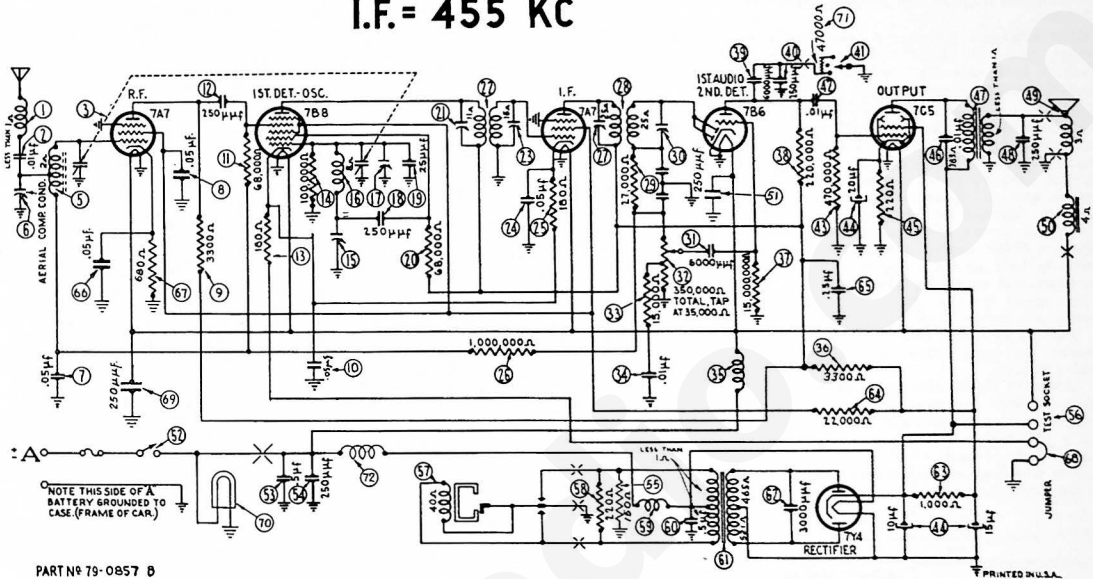


MODEL AR-45

SCHEMATIC MODEL AR-45

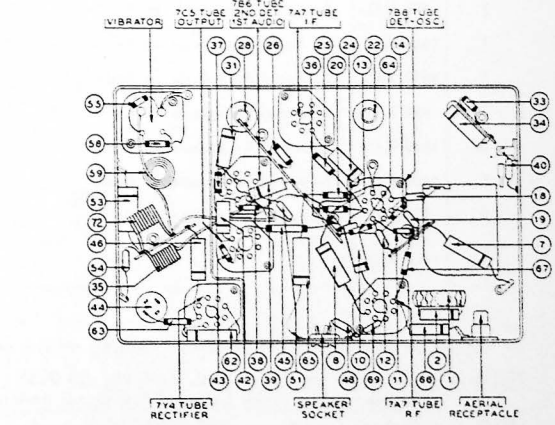
I.F. = 455 KC



PART No 79-0857 B

PARTS LIST — AR-45

| No. | Description | Part No. | No. | Description | Part No. |
|-----|--------------------------------|-----------|-----|-------------------------|-------------------|
| 1 | Antenna Choke | 95-0102 | 33 | Resistor (220 ohms) | 33-124356 |
| 2 | Condenser (.01 Mfd.) | 61-0114 | 34 | Condenser (.01 Mfd.) | 61-0124 |
| 3 | Tuning Condenser | 63-0047 | 35 | Output Transformer | 63-0048 |
| 4 | Antenna Transformer | 63-0023 | 36 | Condenser (250 Mmf.) | 60-123157 |
| 5 | Aerial Condenser | 77-0545 | 37 | Replacement Cone | |
| 6 | Condenser (.05 Mfd.) | 61-0101 | 38 | (For 73-0047-2 Speaker) | 91-0086 |
| 7 | Condenser (.05 Mfd.) | 61-0101 | 39 | (For 73-0047-3 Speaker) | 91-0126 |
| 8 | Resistor (3,300 ohms) | 33-233334 | 40 | (For 73-0058-2 Speaker) | 91-0086 |
| 9 | Condenser (.05 Mfd.) | 61-0101 | 41 | (For 73-0058-3 Speaker) | 91-0126 |
| 10 | Resistor (65,000 ohms) | 33-368134 | 42 | Field Coil | (Not Replaceable) |
| 11 | Condenser (250 Mmf.) | 60-123157 | 43 | Condenser (250 Mmf.) | 60-123157 |
| 12 | Resistor (180 ohms) | 33-118336 | 44 | "On-Off" Switch | 85-0112 |
| 13 | Resistor (100,000 ohms) | 33-410154 | 45 | Condenser (.5 Mfd.) | 61-0137 |
| 14 | Low Frequency Padler | 63-0043 | 46 | Condenser (250 Mmf.) | 60-123157 |
| 15 | Oscillator Transformer | 63-0420 | 47 | Resistor (150 ohms) | 33-113334 |
| 16 | High Frequency Padler | | 48 | Test Socket | 53-1118 |
| 17 | Condenser (250 Mmf.) | 60-123157 | 49 | Vibrator | 83-0025 |
| 18 | Condenser (25 Mmf.) | 60-025337 | 50 | Resistor (220 ohms) | 33-122334 |
| 19 | Resistor (68,000 ohms) | 33-368334 | 51 | Vibrator Choke | 63-0075 |
| 20 | Padler (Pr. 1st I. F. Trans.) | 65-0310 | 52 | Condenser (.5 Mfd.) | 61-0137 |
| 21 | Padler (Sec. 1st I. F. Trans.) | 63-0043 | 53 | Power Transformer | 65-0018 |
| 22 | Condenser (.05 Mfd.) | 61-0101 | 54 | Condenser (3,000 Mmf.) | 61-0113 |
| 23 | Resistor (180 ohms) | 33-118336 | 55 | Resistor (1,000 ohms) | 33-210334 |
| 24 | Resistor (1,000,000 ohms) | 33-510134 | 56 | Condenser (.25 Mfd.) | 61-0125 |
| 25 | Padler (Pr. 2nd I. F. Trans.) | 65-0320 | 57 | Condenser (.05 Mfd.) | 61-0111 |
| 26 | Second I. F. Transformer | 65-0320 | 58 | Resistor (650 ohms) | 33-163336 |
| 27 | Resistor (27,000 ohms) | 33-327134 | 59 | Test Link | 37-1121 |
| 28 | Padler (Sec. 2nd I. F. Trans.) | 61-0135 | 60 | Condenser (250 Mmf.) | 60-123157 |
| 29 | Condenser (6,000 Mmf.) | 61-0135 | 61 | PIBT Lamp | 60-0004 |
| 30 | Volume Control | 67-0032 | 62 | Resistor (17,000 ohms) | 33-347334 |
| 31 | Resistor (15,000 ohms) | 33-315134 | 63 | "A" Choke | 63-0037 |
| 32 | Condenser (.01 Mfd.) | 61-0114 | 64 | Receiver Housing | 77-0095FC31 |
| 33 | Pilot Lamp | 63-0452 | 65 | Control Assembly | 53-1184 |
| 34 | Resistor (3,300 ohms) | 33-233434 | 66 | Dial | 53-1184 |
| 35 | Resistor (15,000,000 ohms) | 33-615134 | 67 | Drive Cog | 33-0035 |
| 36 | Condenser (220,000 ohms) | 33-422334 | 68 | Drive Cord Spring | 57-1225FA3 |
| 37 | Condenser (6,000 Mmf.) | 61-0135 | 69 | Tuning Shaft | 57-1385 |
| 38 | Condenser (250 Mmf.) | 60-123157 | 70 | Volume Shaft | 57-1384 |
| 39 | Tone Control Switch Wafer | 77-0733 | 71 | Pointer | 57-1889FCP |
| 40 | Condenser (.01 Mfd.) | 61-0120 | 72 | Tone Control Lead | 95-0135 |
| 41 | Resistor (170,000 ohms) | 33-417134 | 73 | Hook Bolt (Radio Mtg.) | 57-1340F13 |
| 42 | Filter Condenser | | 74 | Lockwasher (Radio Mtg.) | W1688F27 |
| 43 | (10-15-20 Mfd.) | 61-0089 | 75 | Nut (Radio Mtg.) | W98FA3 |



| No. | Description | Part No. | No. | Description | Part No. |
|-----|----------------------------|------------|-----|---------------------------|-------------|
| 1 | Loktal Socket | 55-0575 | 1 | Speaker Unit | 73-0047 |
| 2 | Vibrator Socket | 27-6133 | 2 | "U" Bracket | 57-0720FA3 |
| 3 | Volume Control Nut | W68FA3 | 3 | Rubber Gasket & Screen | 53-0958 |
| 4 | Tone Control Switch | | 4 | Side Brackets | 57-1461 |
| 5 | Shaft | 57-1830FA3 | 5 | Cardboard Baffle | 55-0957 |
| 6 | Speaker & Housing | 318-2393 | 6 | Cardboard Spacers | 55-0449 |
| 7 | Complete | 73-0033 | 7 | Nuts (Speaker Mtg.) | W124FA3 |
| 8 | Strud (Speaker Mtg.) | 57-0892 | 8 | Screw (Speaker Mtg.) | W1582FA4 |
| 9 | Lockwasher (Speaker Mtg.) | 2702FA3 | 9 | Lockwasher (Speaker Mtg.) | W931 |
| 10 | Lockwasher (Speaker Mtg.) | W3333 | 10 | Lockwasher (Speaker Mtg.) | W926 |
| 11 | Nut (Speaker Mtg.) | W55FA3 | 11 | Carriage Bolt | 87-0061FA3 |
| 12 | Wood Spacer (Speaker Mtg.) | 55-0642 | 12 | Carriage Bolt Nut | W98FA3 |
| | | | 13 | Bolt (Bracket Mtg.) | 87-0120FA34 |

MODEL AR-45 (CONTINUED)

MODEL AR-45 — 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.

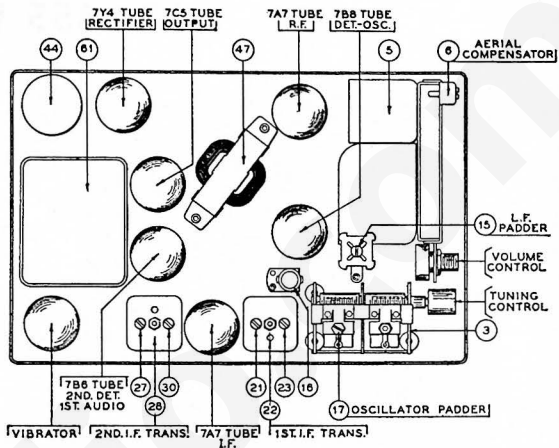
EQUIPMENT — Fully charged heavy duty storage battery or 6 volt power pack, 077 or 177 Philco Signal generator, 027 Philco Vacuum tube voltmeter and set tester or audio output meter, 45-2610 Padding screw driver.

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 | ③ ② ⑦ ⑧ ⑨ |
| 3 | 1580 K.C. | To Aerial Receptacle on Radio | See Note 1 | Note 2 | ⑩ |
| 4 | 1400 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Condenser at 1400 K.C. | Note 4 |
| 5 | 580 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Condenser at 580 K.C. | Note 3 |
| 6 | 1580 K.C. | To Aerial Receptacle on Radio | See Note 1 | Note 2 | ⑪ |
| 7 | 1400 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Condenser at 1400 K.C. | Note 4 |
| 8 | 580 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Condenser at 580 K.C. | Note 3 |
| 9 | 1200 to 1400 K.C. | Note 5 | Note 5 | Note 5 | ⑫ |

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.