

MODEL F-1840 FORD CUSTOM AUTO RADIO

MODEL F-1840 — 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.

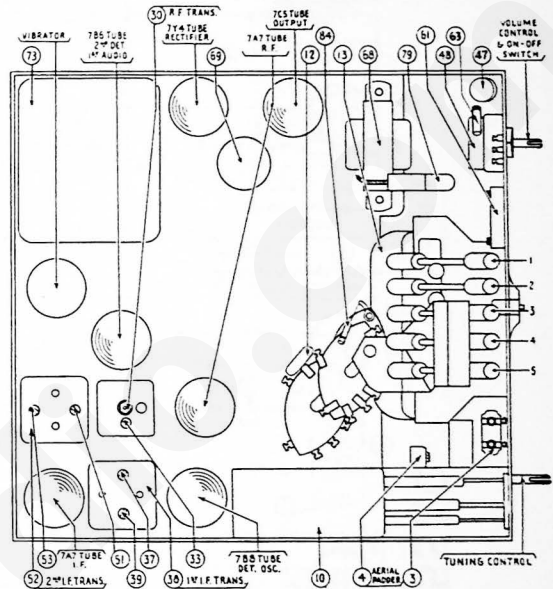


FIGURE 1

| OPERATION | SIGNAL GENERATOR | | DUMMY CAPACITY | SPECIAL INSTRUCTIONS | ADJUST PADDER |
|-----------|------------------|---|----------------|---------------------------------|---------------|
| | FREQUENCY | CONNECTION | | | |
| 1 | | TURN THE SELECTOR SWITCH KNOB TO "D" SO THAT STATIONS CAN BE TUNED IN BY MANUAL TUNING. | | | |
| 2 | 455 K.C. | To Aerial Receptacle on Radio | .1 Mfd. | Note 2 | ① ② ③ ④ |
| 3 | 455 K.C. | To Aerial Receptacle on Radio | .1 Mfd. | Note 2 | ⑤ Min. |
| 4 | 1360 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Control at 1360 K.C. | ① Note 4 |
| 5 | 590 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Control at 590 K.C. | ② Note 3 |
| 6 | 1400 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Control at 1400 K.C. | ③ Note 4 |
| 7 | 590 K.C. | To Aerial Receptacle on Radio | See Note 1 | Set Tuning Control at 590 K.C. | ④ Note 3 |

Make all adjustments for maximum reading on the meter.

NOTE 1 — Connect the aerial lead Part No. 95-0111, to the aerial receptacle in the radio. Connect a 20 Mmfd. Condenser in series between the signal generator and the aerial lead.

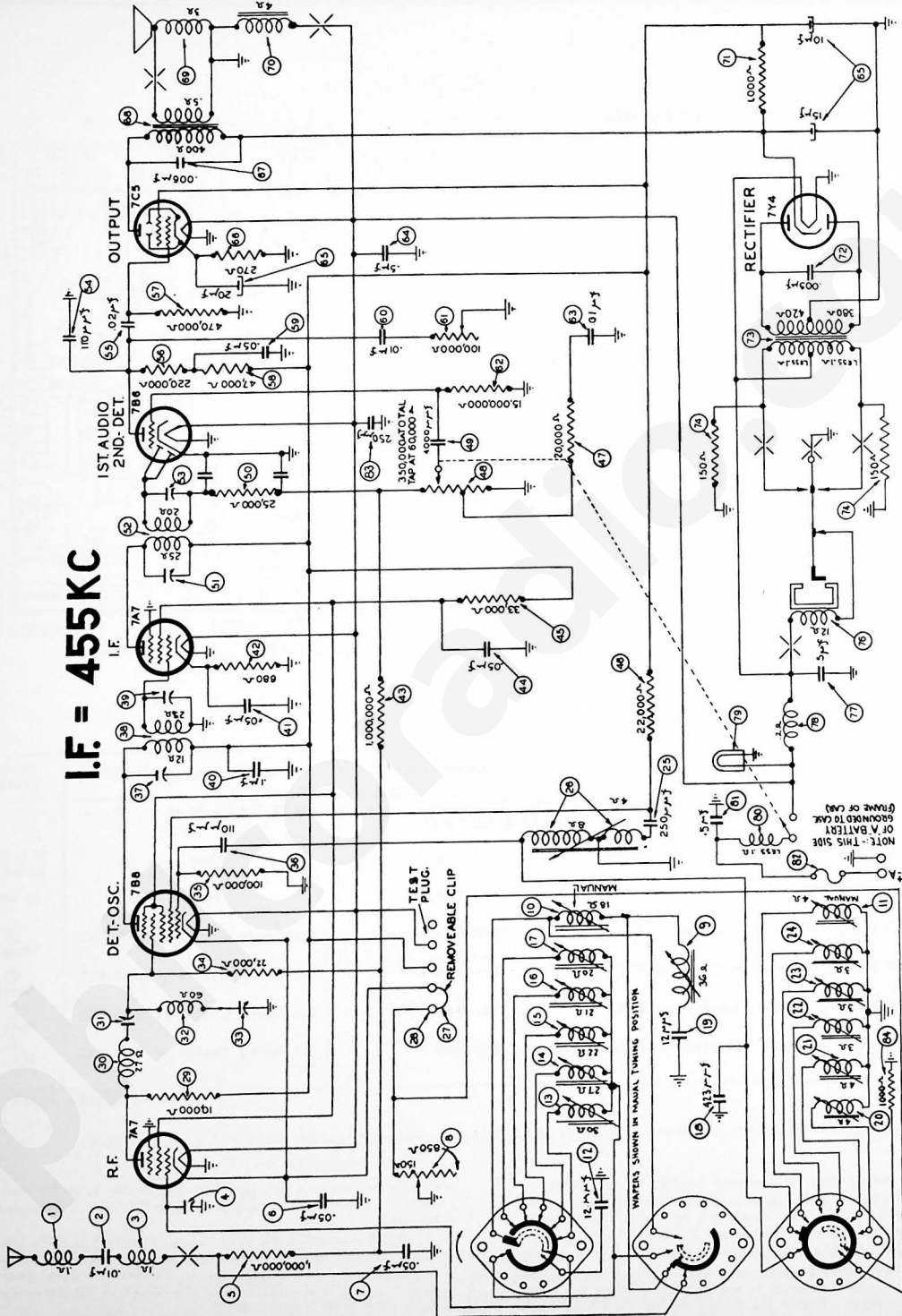
NOTE 2 — Turn the tuning control clockwise as far as it will go.

NOTE 3 — Rock the tuning control while adjusting the low frequency screw. Tune the control to the signal and adjust the screw for maximum output. Rotate the tuning control back and forth

slightly for maximum output. Then readjust the screw 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.

MODEL F-1840 FORD CUSTOM AUTO RADIO (CONTINUED)



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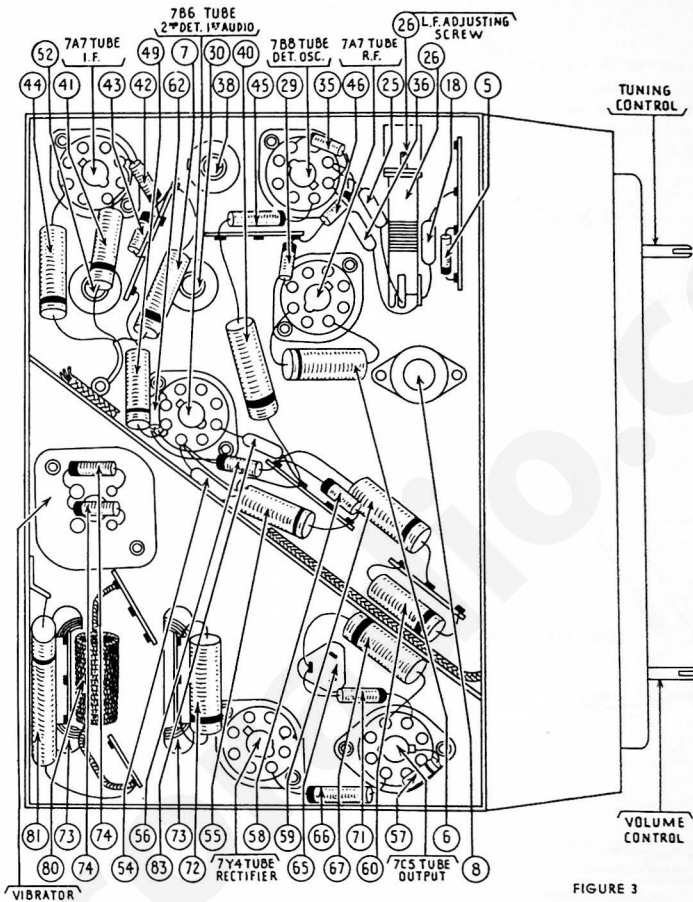


FIGURE 3

PARTS LIST — F-1840

| No. | Description | Part No. | No. | Description | Part No. | No. | Description | Part No. |
|-----|---------------------------|-----------|-----|---------------------------------|-----------|-----|-------------------------------|-----------------|
| ① | Antenna Choke | 65-0102 | ③ | R. F. Transformer (Pri.) | 65-0415 | ② | Condenser (.01 Mfd.) | 61-0100 |
| ② | Condenser (.01 Mfd.) | 61-0114 | ④ | Padder | Part of ③ | ③ | Tone Control | 85-1140 |
| ③ | Antenna Choke | 30-2063 | ⑤ | R. F. Transformer (Sec.) | Part of ③ | ④ | (100,000 ohms) | 85-0128 |
| ④ | Aerial Compensator | 63-0063 | ⑥ | Padder | Part of ⑤ | ⑤ | Resistor | 33-615154 |
| ⑤ | Resistor | 33-510154 | ⑦ | Resistor (22,000 ohms) | 33-322334 | ⑥ | (15,000,000 ohms) | 33-615154 |
| ⑥ | (1,000,000 ohms) | 33-510154 | ⑧ | Resistor (100,000 ohms) | 33-101534 | ⑦ | Condenser (.01 Mfd.) | 61-0110 |
| ⑦ | Condenser (.05 Mfd.) | 61-0111 | ⑨ | Condenser (110 Mfd.) | 60-110157 | ⑧ | Condenser (.5 Mfd.) | 61-0106 |
| ⑧ | Condenser (.05 Mfd.) | 61-0111 | ⑩ | Padder (Pri. 1st. I. F. Trans.) | Part of ⑨ | ⑨ | Filter Condenser | 61-0089 |
| ⑨ | Sensitivity Control | 67-0025 | ⑪ | First I. F. Transformer | 65-0386 | ⑩ | (10-15-20 Mfd.) | 61-0089 |
| ⑩ | Image Trap Coil | Part of ⑨ | ⑫ | Padder (Sec. 1st I. F. Trans.) | Part of ⑪ | ⑪ | Resistor (270 ohms) | 33-127436 |
| ⑪ | Inductive Tuning Unit | 77-0701 | ⑬ | Condenser (.1 Mfd.) | 61-0113 | ⑫ | Condenser (5,000 Mmf.) | 61-0105 |
| ⑫ | Manual Tuning Oscillator | 77-0701 | ⑭ | Condenser (.05 Mfd.) | 61-0101 | ⑬ | Output Transformer | 65-0391 |
| ⑬ | Transformer | Part of ⑫ | ⑮ | Resistor (680 ohms) | 33-168336 | ⑭ | Replacement Cone | 91-0166 |
| ⑭ | Condenser (12 Mmf.) | 60-012327 | ⑯ | Resistor | Part of ⑮ | ⑮ | (For Speaker 73-0054-2) | 91-0166 |
| ⑮ | Push Button Coil Assembly | 77-0706 | ⑰ | (1,000,000 ohms) | 33-310154 | ⑯ | Field Coil | Not Replaceable |
| ⑯ | Push Button Coil Assembly | Part of ⑮ | ⑱ | Condenser (.05 Mfd.) | 61-0101 | ⑰ | Resistor (1,000 ohms) | 33-210434 |
| ⑰ | Push Button Coil Assembly | Part of ⑮ | ⑲ | Resistor (33,000 ohms) | 33-333434 | ⑱ | Condenser (5,000 Mmf.) | 61-0153 |
| ⑱ | Push Button Coil Assembly | Part of ⑮ | ⑳ | Resistor (22,000 ohms) | 33-322334 | ⑲ | Power Transformer | 65-03178 |
| ⑲ | Push Button Coil Assembly | Part of ⑮ | ㉑ | Resistor (20,000 ohms) | 33-320154 | ㉑ | Resistor (150 ohms) | 33-115334 |
| ㉑ | Silver Mica Condenser | 61-0066 | ㉒ | Volume Control (35,000 ohms) | Part of ㉑ | ㉒ | Vibrator | 83-0026 |
| ㉒ | (423 Mmf.) | 61-0066 | ㉓ | & On-Off Switch | 67-0042 | ㉓ | Condenser (.5 Mfd.) | 61-0137 |
| ㉓ | Condenser (12 Mmf.) | 60-012327 | ㉔ | Condenser (4,000 Mmf.) | 61-0128 | ㉔ | Vibrator Choke | 65-0398 |
| ㉔ | Push Button Coil Assembly | Part of ㉓ | ㉕ | Resistor (25,000 ohms) | 33-325154 | ㉕ | Pilot Lamp | 34-2064 |
| ㉕ | Push Button Coil Assembly | Part of ㉓ | ㉖ | Padder (Pri. 2nd I. F. Trans.) | Part of ㉕ | ㉖ | "A" Choke | 65-0037 |
| ㉖ | Push Button Coil Assembly | Part of ㉓ | ㉗ | Second I. F. Transformer | 65-0387 | ㉗ | Condenser (.5 Mfd.) | 61-0137 |
| ㉗ | Push Button Coil Assembly | Part of ㉓ | ㉘ | Padder (Sec. 2nd I. F. Trans.) | Part of ㉗ | ㉘ | Fuse | 45-2559 |
| ㉘ | Push Button Coil Assembly | Part of ㉓ | ㉙ | Condenser (110 Mmf.) | 60-110137 | ㉙ | Condenser (250 Mmf.) | 60-125157 |
| ㉙ | Condenser (.250 Mmf.) | 60-125157 | ㉚ | Resistor (.02 Mfd.) | 61-0116 | ㉚ | Resistor (1,000 ohms) | 33-210534 |
| ㉚ | Oscillator Tracking Coil | 65-0388 | ㉛ | Resistor (200,000 ohms) | 33-423334 | ㉛ | Selector Switch Knob & Spring | 318-2376 |
| ㉛ | Test Socket Link | 57-1121 | ㉜ | Resistor (470,000 ohms) | 33-447154 | ㉜ | Tuning & Volume Knob | 77-0708 |
| ㉜ | Test Socket | 55-1104 | ㉝ | Resistor (47,000 ohms) | 33-347334 | ㉝ | Rubber Baffle Gasket | 35-1134 |
| ㉝ | Resistor (10,000 ohms) | 33-310334 | ㉞ | Condenser (.05 Mfd.) | 61-0122 | | | |

MODEL F-1840 FORD CUSTOM AUTO RADIO (CONTINUED)

RUN NUMBER CHANGES

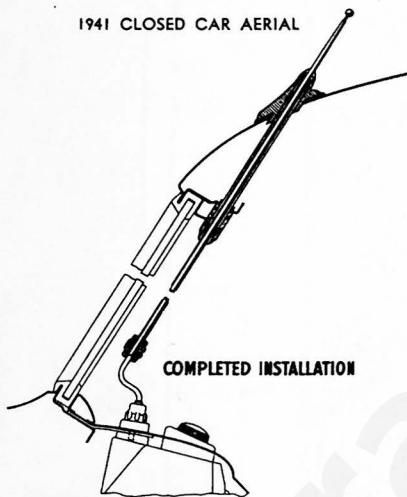
"Run Numbers" are stamped on the chassis sub-base for identification. These run numbers are changed consecutively as major changes are made to the Radio wiring and parts.

RUN No. 3—Ground spring added on sub-base to make contact on speaker field coil pot.

RUN No. 4—A Resistor (390 ohms) Part No. 33-139334 has been added in series between the plates of all tubes and the 10 Mfd. section of filter condenser. The low side connects to the plates and the high side the filter condenser. This resistor is placed ahead of the 7C5 grid.

F-1840 AND F-1841 FORD AERIALS

1941 CLOSED CAR AERIAL

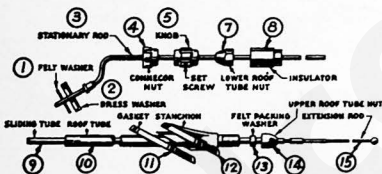
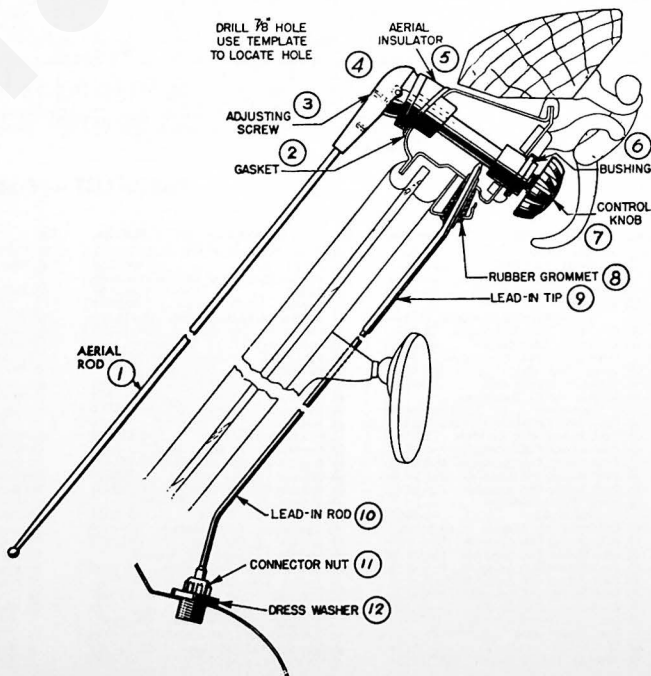


OPEN CAR AERIAL PARTS LIST

| No. | Description | Part No. | List Price |
|-----|---------------------------|----------|------------|
| ① | Aerial Rod | 77-0866 | \$1.25 |
| ② | Gasket | 55-0285 | .03 |
| ③ | Adjusting Screw | 57-1836 | .06 |
| ④ | Aerial Head & Shaft Assy. | 91-0182 | 2.75 |
| ⑤ | Aerial Insulator Assy. | 55-1165 | .45 |
| ⑥ | Insulating Bushing | 55-1300 | .40 |
| ⑦ | Control Knob | 77-0738 | .50 |
| ⑧ | Rubber Grommet | 77-0735 | .25 |
| ⑨ | Lead-in Tip | 57-1838 | .40 |
| ⑩ | Lead-in Rod | 77-0734 | .45 |
| ⑪ | Connector Nut | 55-1166 | .15 |
| ⑫ | Dress Washer | 57-1137 | .10 |
| | Felt Washer (per 100) | 55-0811 | 1.25 |
| | Complete Aerial | 91-0179 | 4.50 |
| | Lead-in Spring | 57-1218 | .10 |
| | Set Screw Wrench | 28-4696 | .10 |
| | Screw (Aerial Rod) | W1944 | .10 |

Prices subject to change without notice.

1941 OPEN CAR AERIAL



CLOSED CAR AERIAL PARTS LIST

| No. | Description | Part No. | List Price |
|-----|-----------------------|------------|------------|
| | Complete Aerial | 91-0178 | \$3.50 |
| ① | Felt Washer (per 100) | 55-0811 | 1.25 |
| ② | Dress Washer | 57-1137FA8 | .10 |
| ③ | Stationary Tube | 77-0726 | .90 |
| ④ | Connector Nut | 55-1166 | .15 |
| ⑤ | Knob | 77-0723 | .40 |
| ⑥ | Knob Set Screw | W2105FA4 | .10 |
| ⑦ | Lower Roof Tube Nut | 57-1131FA8 | .15 |
| ⑧ | Insulator | 55-0783 | .10 |
| ⑨ | Sliding Tube | 77-0725 | .85 |
| ⑩ | Roof Tube | 77-0724 | .50 |
| ⑪ | Gasket | 55-0785 | .05 |
| ⑫ | Stanchion | 55-0781 | .15 |
| ⑬ | Felt Washer | 55-0780 | .02 |
| ⑭ | Upper Roof Tube Nut | 57-1135FA8 | .15 |
| ⑮ | Part of ⑩ | | |
| | Set Screw Wrench | 28-4696 | .10 |
| | Template | 57-1828 | .05 |

Prices subject to change without notice.