# MANUAL OF INSTALLATION



## EAR LEVEL RECEPTION, TWO UNIT RADIO
## with
## CONCEALED HEADER BAR SPEAKER
## For use only with
## FORD ROTARY *(Reserve Power)* AERIAL
## for
## 1937 FORD CARS

*Manufactured for*

**FORD MOTOR COMPANY**

DETROIT, MICHIGAN

By

**PHILCO**

PHILADELPHIA, PENNSYLVANIA

# The New Ford Radio Receiver

SOLD EXCLUSIVELY BY FORD DEALERS

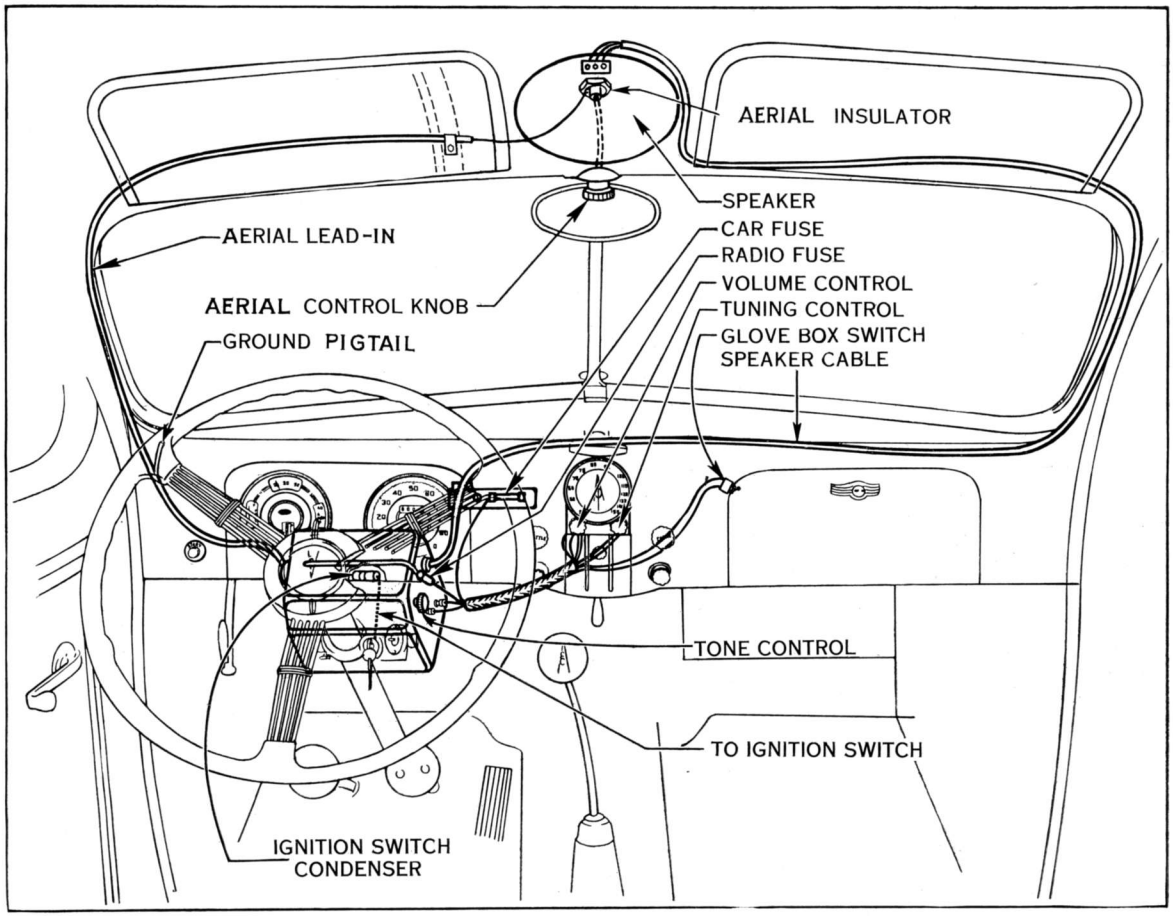



FIGURE 1

The New Ford Auto Radio Incorporates Advanced Principles of Tube and Circuit Design.

A totally new idea in sound distribution and music fidelity is built into the dynamic speaker concealed behind the header bar of the car, above the occupants' heads. Other features of the Receiver are — two unit construction with separate Flush-Type Speaker, highly developed automatic volume control, and illuminated, custom-built, instrument board control, mounting in the opening in the instrument board above the ash receptacle.

The Receiver is mounted on the dash directly above the steering column, out of sight and out of the way. It does not interfere with the installation of a hot-air heater and does not restrict leg room.

***Many Happy Miles With a Ford Auto Radio***

# Ford Radio Installation and Operating Instructions
# Part No. 78-18805 A and B

## SOLD EXCLUSIVELY BY THE FORD MOTOR COMPANY

These instructions have been carefully prepared for your assistance in installing the 78-18805A Radio in the 1937 Ford cars. Read these instructions carefully in every detail before attempting an installation. For open and convertible cars, use the Open Car Radio, 78-18805B, as supplied by the Ford Motor Company and follow the instructions printed below, except those pertaining to the speaker location and installation.

### AERIAL

A special aerial is provided for installation on the front of the roof on closed cars and on the top windshield bar on open cars. See the detailed and illustrated installation instructions packed with the aerial.

### INSTRUMENT BOARD CONTROL

Remove the cover plate above the ash receptacle. This is held in place with flanges which can easily be bent back, thereby permitting the removal of the plate (See Fig. 2). Assemble the control head and shafts in this opening and fasten in place with the "U" clamp and wing nuts. Tighten the wing nuts until the flange on the control head is drawn up tightly against the front of the instrument board (See Fig. 3).

### "A" LEAD

Punch or drill a ½" hole in the upper left corner of the glove box and install the glove box switch in this hole. Secure it with the nuts and washers on the switch. Connect the "A" lead with the eyelet terminal to the hot side of the fuse block. After the Receiver is installed, insert the fuse and fuse insulator in the fuse housing and connect it to the Receiver "A" lead.

### RADIO LOCATION AND INSTALLATION

The Receiver mounting hole locations are punch marked on the motor side of the dash. (Refer to Figure 4) for the exact location. Drill or punch two 7/16" holes in the dash and loosely assemble the "Tee" bolts as shown in (Figure 5). Install the Receiver above the steering column as shown in Figure 1. Hook the "Tee" bolts into the brackets on top of the Receiver. Tighten the Receiver securely in place.

After the aerial has been installed, connect the aerial lead to the aerial receptacle on the left side of the Receiver.

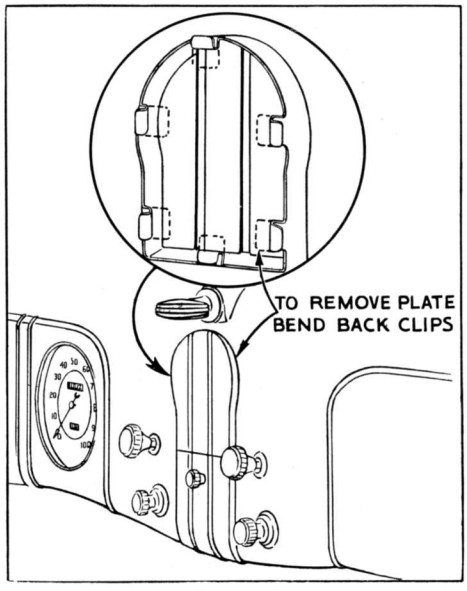



FIGURE 2

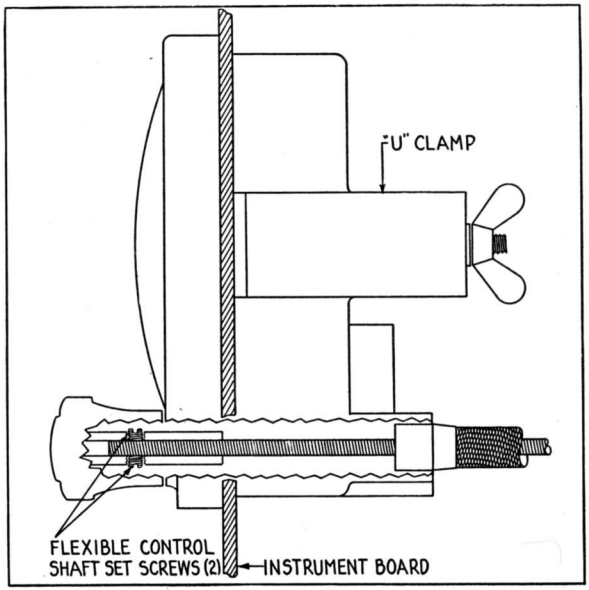



FIGURE 3

## FLEXIBLE SHAFTS

With a small screw driver, turn the tuning condenser coupling in the Receiver (the one farthest from the dash) COUNTER CLOCKWISE as far as it will go. Set the control pointer at the low end of the scale (55). Then couple the flexible tuning control shaft in the tuning control bushing on the Receiver. Next couple the flexible volume control shaft to the Receiver.

Turn the volume control clockwise as far as it will go, then turn it counter-clockwise until the switch clicks "off" in the control head. This synchronizes the low point of the volume control with the "off" point in the switch.

After the shafts have been properly seated, the knurled shaft casing nuts must be securely tightened with the fingers.

## SPEAKER LOCATION AND INSTALLATION (Closed Cars) (See Fig. 6 and 7)

Mount the speaker on the back of the header where it is concealed by the header cloth. The header must be removed entirely to install the speaker. To do this:

1.—Loosen the rear vision mirror bracket.

2.—Remove the windshield wiper regulating knob.

3.—Loosen the windshield opening finish strip.

4.—Remove the four sheet metal screws which hold the header in place, one at each end and near the end.

5.—REMOVE THE PAPER INSERT FROM THE BACK OF THE CIRCULAR SPEAKER OPENING.

Hold the speaker in place with the four mounting holes lined up with the four holes provided in the supporting brackets. The terminal panel on the speaker must be to the top. Then fasten the speaker assembly with the self-threading screws. Figure 7 shows the details of the speaker installation assembly.

A fish cord for the speaker cable is tied to a roof brace. It can be seen behind the header bar and runs down the RIGHT pillar. A tow strap made of loose cotton braid is provided in the accessory kit. Enlarge the open end of the braid and tuck in the terminal end of the speaker cable. Fasten the fish cord to the loop on the tow strap and pull the speaker cable up the right-hand pillar and over to the speaker. Before replacing the header, install the aerial. (See instructions in aerial package). The

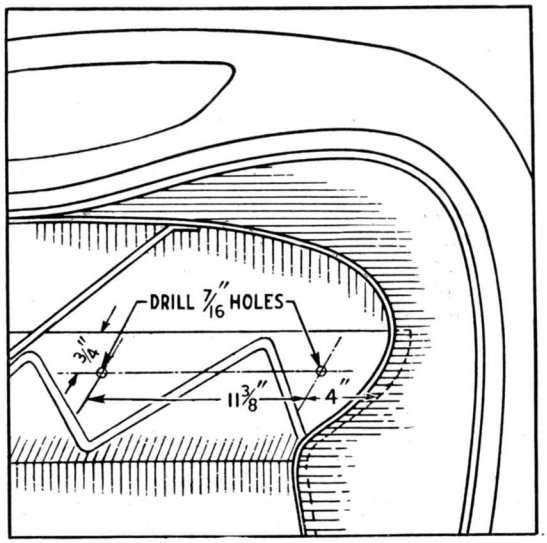



FIGURE 4

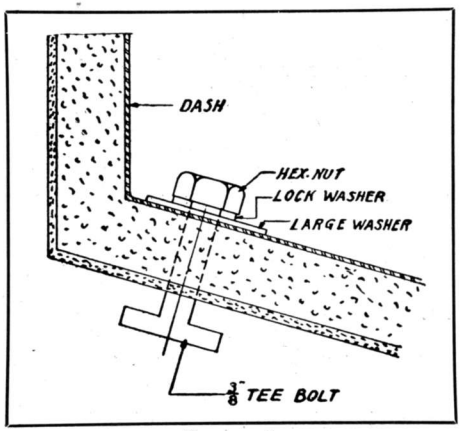



FIGURE 5

colors of the speaker cable wires correspond to the colors on the speaker terminals to which they must be connected.

Replace the header and the wiper knob. Tighten all screws on the rear vision mirror and the windshield finish strip.

Connect the speaker plug in its receptacle on the right side of the Receiver housing.

## SPEAKER LOCATION (Open Cars)

Install the speaker on the center of the dash. Drill a mounting hole in the center of the raised portion 4½ inches below the break in the dash. Screw the stud into the back of the speaker and secure it to the dash with the nut and lock-washer. Connect the speaker cable into the socket on the end of the Receiver.

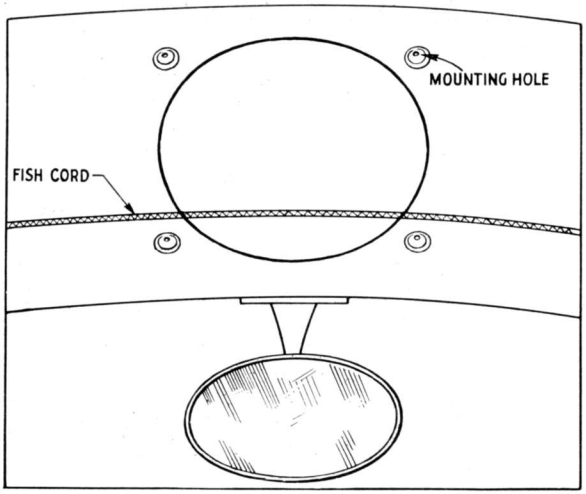



FIGURE 6

## DIAL ADJUSTMENT

The Receiver is calibrated in kilocycles with the last "0" omitted. Turn on the Receiver by rotating the left-hand knob in a clockwise direction. It will take a few moments for the tubes to heat up. Tune in a station of known frequency and remove the right-hand knob.

Loosen the set screws on the shaft under the knob until the pointer moves freely without affecting the tuning (See Fig. 3). Now turn the pointer to the frequency of the station which is tuned in. Tighten the set screws and replace the knob. Check the accuracy of the calibration on other stations at different points on the dial and adjust further if necessary.

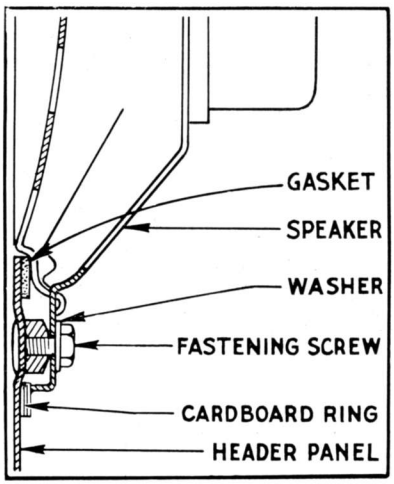



FIGURE 7

## SPARK NOISE ELIMINATION

The following operations must be performed with the greatest care to insure freedom from ignition disturbance.

## IGNITION SWITCH CONDENSER

Drill a hole in the flange of the instrument board just above the ignition switch and mount the interference condenser, Part No. 78-18827 (See Fig. 1). Connect the condenser lead to one of the terminals of the ignition switch.

## GENERATOR INTERFERENCE

Remove the generator cut-out mounting screw and fasten the condenser (Part No. 78-18827) bracket on the generator cut-out mounting lug. Replace the cut-out mounting screw and tighten securely. Connect the condenser lead to the battery terminal of the cut-out. (See Fig. 8).

## OIL GAUGE INTERFERENCE

Connect an interference condenser, (Part No. 48-18823) to the oil gauge. Figure 9 shows the mounting and connection for the Model 60 car,

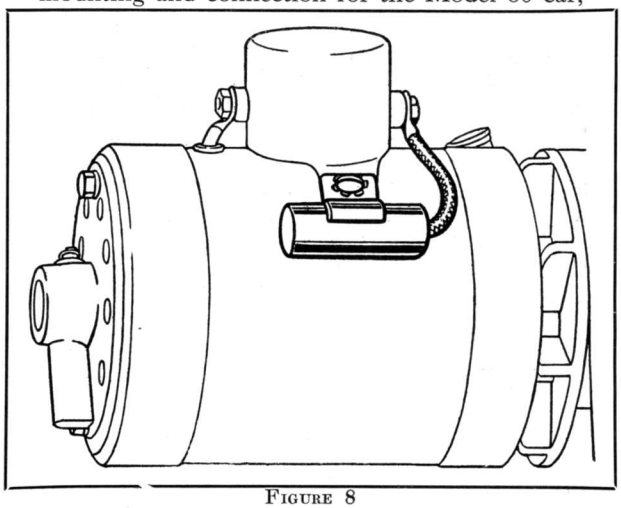


FIGURE 8

while Figure 10 shows the details for the Model 85 car. On the latter, the condenser must be mounted on the dash under a screw holding the gas line to the dash.

## GAS GAUGE INTERFERENCE

Install the gasoline gauge condenser (Part No. 68-18871) with special bracket on the gas gauge as shown in Figure 11. It will be necessary to remove the spare wheel and the cover plate over the gauge before it is accessible.

## OPERATING INSTRUCTIONS

The left-hand knob on the control is a combination switch and volume control. After the

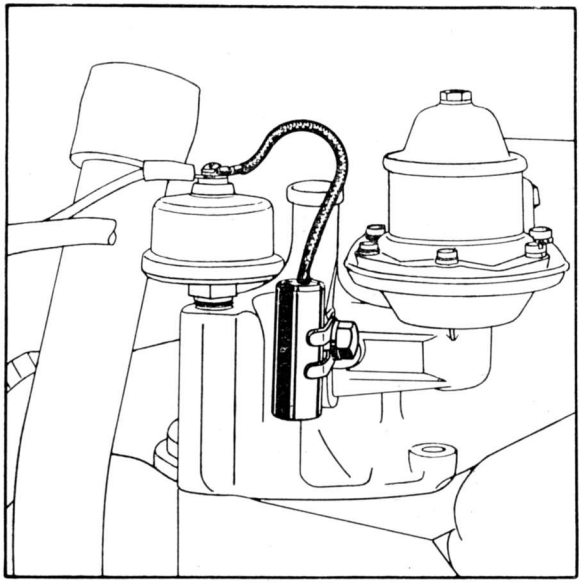


FIGURE 9

radio switch has been turned on, turn the volume control knob clockwise. The first range of motion operates the Receiver switch, from there on it is the manual volume control.

With the volume control turned on half way, allow the tubes to heat up. Then turn the other knob (tuning control) to tune in the various programs. Adjust the volume to a suitable level and recheck the tuning. Be sure the Receiver is tuned accurately, otherwise distorted reception will result and local electrical disturbances will be magnified.

This Receiver is equipped with a highly developed automatic volume control system which tends to maintain the volume at a constant level. However, there are some places — under viaducts, bridges, tunnels, etc., where the radio signal becomes so weak that it cannot be heard.

When driving under trolley lines or in noisy locations, it is advisable to tune in on a strong local station.

The tone control knob is located on the right side of the Receiver. (See Figure 1). By adjusting this control, different degrees of high frequency response can be obtained. While listening through static or other interference noises, use the deepest tone setting.

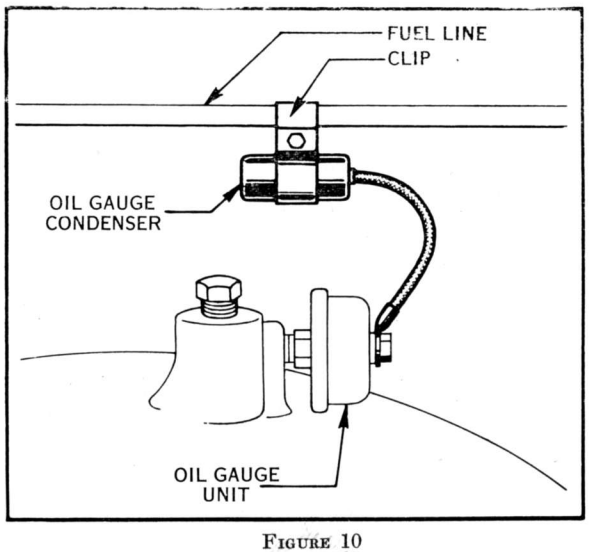



FIGURE 10

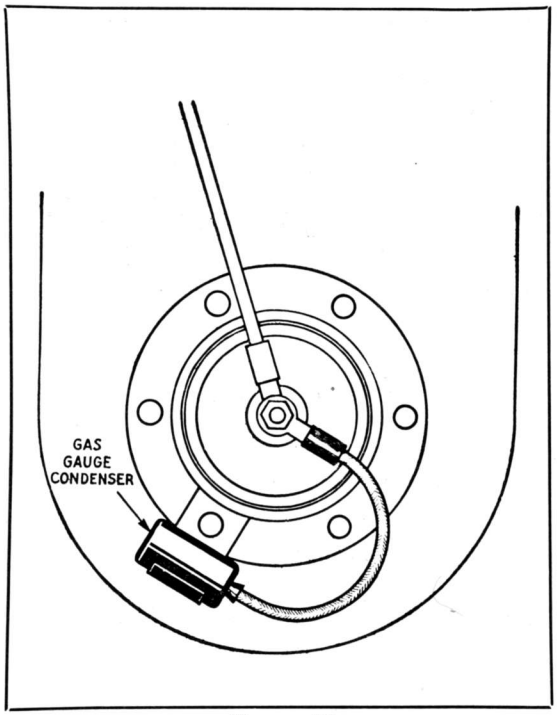
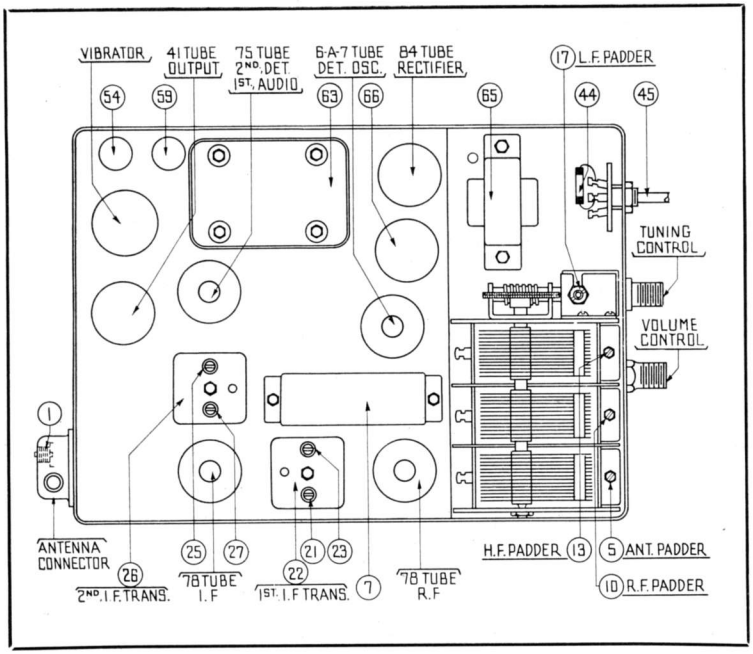



FIGURE 11

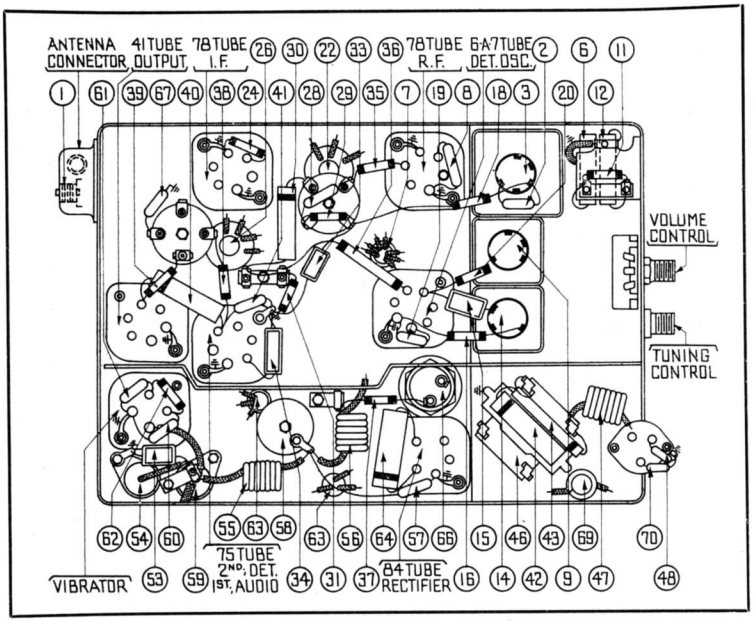
When turning off the Receiver, be sure the volume control (left-hand) knob is turned counter-clockwise until a snap is heard and the dial light goes out. Otherwise the Receiver will continue to operate and discharge the battery.

The Receiver can be locked by turning off the radio operating switch in the right glove compartment and locking the compartment door.



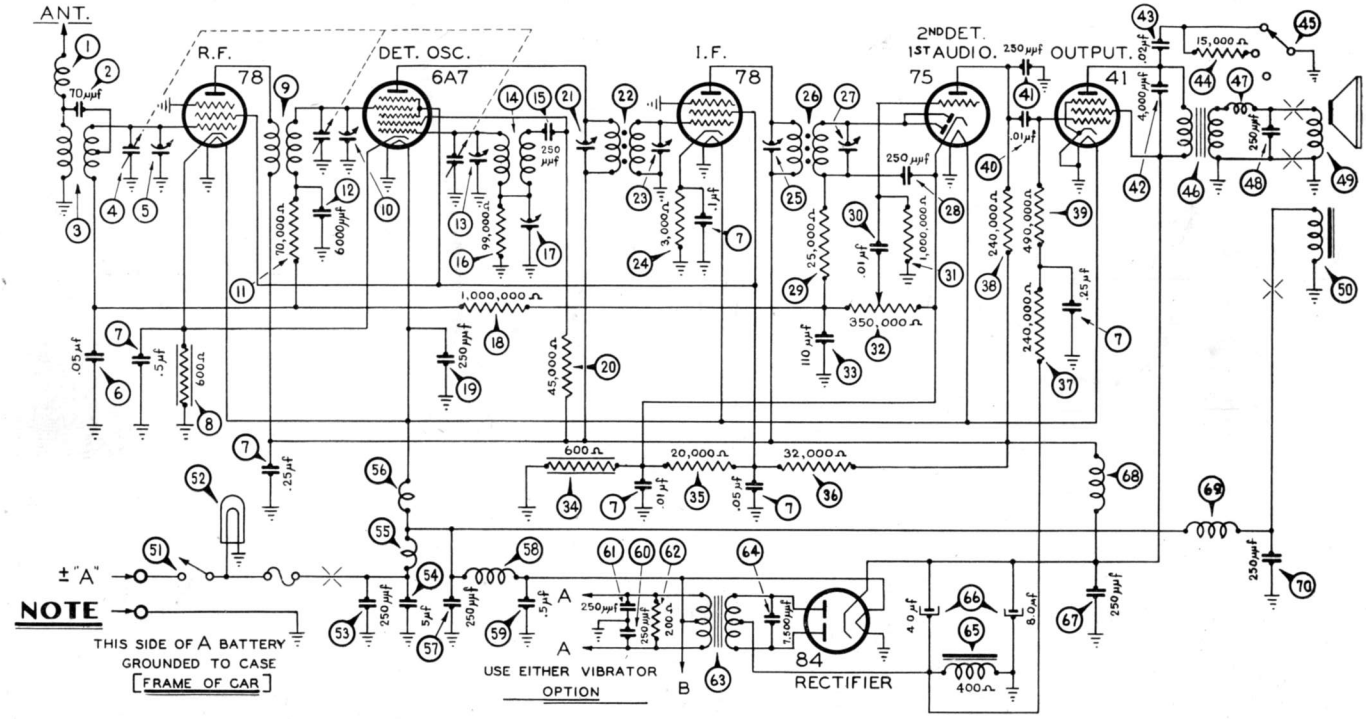

View Showing Tube Locations

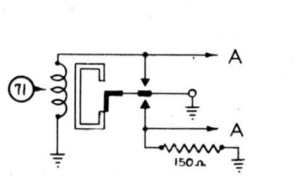
FIGURE 12



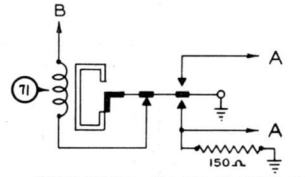

View Showing Base Arrangement

FIGURE 13




VIBRATOR PT. Nº 41-3170·2




VIBRATOR PT Nº 41-3170·3

# I.F.= 260 KC.

## MODEL F-1442 RECEIVER

| No. | Description |
|---|---|
| ① | Antenna choke |
| ② | Condenser (70 mmfd.) |
| ③ | Antenna transformer |
| ④ | Tuning condenser |
| ⑤ | First padder (on tun. cond.) |
| ⑥ | Condenser (.05 mfd.) |
| ⑦ | Condenser (.01-.05-.1-.25-.25-.5 mfd.) |
| ⑧ | Resistor (600 ohms) |
| ⑨ | R. F. transformer |
| ⑩ | Second padder (on tun. cond.) |
| ⑪ | Resistor (70,000 ohms) |
| ⑫ | Condenser (6000 mmfd.) |
| ⑬ | Third padder (on tun. cond.) |
| ⑭ | Oscillator transformer |
| ⑮ | Condenser (250 mmfd.) |
| ⑯ | Resistor (99,000 ohms) |
| ⑰ | Low frequency padder |

| No. | Description |
|---|---|
| ⑱ | Resistor (1,000,000 ohms) |
| ⑲ | Condenser (250 mmfd.) |
| ⑳ | Resistor (45,000 ohms) |
| ㉑ | Padder (Pri. 1st I. F. trans.) |
| ㉒ | First I. F. transformer |
| ㉓ | Padder (Sec. 1st I. F. trans.) |
| ㉔ | Resistor (3000 ohms) |
| ㉕ | Padder (Pri. 2nd I. F. trans.) |
| ㉖ | Second I. F. transformer |
| ㉗ | Padder (Sec. 2nd I. F. trans.) |
| ㉘ | Condenser (250 mmfd.) |
| ㉙ | Resistor (25,000 ohms) |
| ㉚ | Condenser (.01 mfd.) |
| ㉛ | Resistor (1,000,000 ohms) |
| ㉜ | Volume control (350,000 ohms) |
| ㉝ | Condenser (110 mmfd.) |
| ㉞ | Resistor (600 ohms) |
| ㉟ | Resistor (20,000 ohms) |

| No. | Description |
|---|---|
| ㊱ | Resistor (32,000 ohms) |
| ㊲ | Resistor (240,000 ohms) |
| ㊳ | Resistor (240,000 ohms) |
| ㊴ | Resistor (490,000 ohms) |
| ㊵ | Condenser (.01 mfd.) |
| ㊶ | Condenser (250 mmfd.) |
| ㊷ | Condenser (4000 mmfd.) |
| ㊸ | Condenser (.02 mfd.) |
| ㊹ | Resistor (15,000 ohms) |
| ㊺ | Tone control switch |
| ㊻ | Output transformer |
| ㊼ | Choke |
| ㊽ | Condenser (250 mmfd.) |
| ㊾ | Cone & Voice coil |
| ㊿ | Field coil assembly |
| (51) | On & Off switch |
| (52) | Pilot lamp |
| (53) | Condenser (250 mmfd.) |

| No. | Description |
|---|---|
| (54) | Condenser (.5 mfd.) |
| (55) | "A" choke |
| (56) | Filament choke |
| (57) | Condenser (250 mmfd.) |
| (58) | Vibrator choke |
| (59) | Condenser (.5 mfd.) |
| (60) | Condenser (250 mmfd.) |
| (61) | Condenser (250 mmfd.) |
| (62) | Resistor (200 ohms) |
| (63) | Power transformer |
| (64) | Condenser (7500 mmfd.) |
| (65) | Filter choke |
| (66) | Filter condenser (4 - 8 mfd.) |
| (67) | Condenser (250 mmfd.) |
| (68) | "B" choke |
| (69) | Choke |
| (70) | Condenser (250 mmfd.) |
| (71) | Vibrator |

Part No. 39-5363—15—2-37

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