

INSTALLATION AND OPERATING INSTRUCTIONS

PHILCO REG. U. S. PAT. OFF. TRANSITONE

MODEL 817

THE PHILCO AUTO RADIO MODEL 817 is Philco's newest in automobile radio. It is a highly developed superheterodyne, single-unit type Receiver, with all the modern features required in such a fine instrument.

THE NEW RECEIVER IS EQUIPPED WITH AN ADJUSTABLE ANTENNA STAGE, WHICH MAKES IT POSSIBLE TO OPERATE THE RECEIVER AT MAXIMUM EFFICIENCY ON ANY ROOF-TYPE OR UNDER-CAR TYPE ANTENNA.

The Receiver, the full-size speaker and full-wave Philco Vibrator are housed in a rugged, compact, fully shielded container which is designed for quick and easy installation on the dash of all automobiles, with two "Tee" bolts. The installation in most cars, can be easily made above the steering column. The loud speaker faces the front seat, so that the improved full-size Philco Electro-dynamic Speaker delivers its full-toned reproduction toward the occupants of the car with utmost fidelity. The speaker panel is easily removed so that tubes and vibrator are accessible for service.

All tubes used are the latest Philco High Efficiency Tubes, designed for automobile radio. Several of these tubes perform the functions formerly requiring two or three tubes, thereby effecting greater tube economy, reducing the number of tubes necessary for satisfactory

operation, and also reducing the amount of current taken from the car battery to a minimum.

Philco's system of automatic volume control is used, giving smooth, elastic control which counteracts fading while driving along under varying conditions and prevents blasting of local stations.

The tone control is right at the finger tips on the control unit.

This new, all-electric Receiver is equipped with improved interference filters and especially designed shielding to eliminate motor interference making it possible to install it quickly and easily.

The new streamline "wide vision" standard control can be installed on the edge of the instrument board. This control unit is exceptionally attractive and is designed to blend harmoniously with the instrument boards of practically all cars.

There is also a choice of "customed" controls for some of the 1936 cars. These special controls match the instrument board fittings and are designed for installation in the space provided for radio control in the instrument boards.

There are only two connections to make, one to the antenna, the other to the ammeter binding post.

Now, more than ever, **THE NEW PHILCO AUTO RADIO IS EASY TO INSTALL** and is a **PLEASURE TO OPERATE.**

GENERAL INSTRUCTIONS

ANTENNA—In cars equipped with a top antenna, the lead-in is generally brought down one of the windshield pillars and coiled behind the cowl trim panel. In such cases, the Receiver antenna lead must be spliced to the antenna lead-in as close as possible to the corner post. Ground the shield pigtail to the cowl panel under a convenient screw.

In cars having an all-metal turret top, the Philco special under-car antenna (Part No. 45-1128 Kit) should be installed. The shielded antenna lead-in furnished with the kit can usually be dressed along the frame and brought up through the floor of the car to the Receiver. Keep the lead-in out of the motor compartment. Complete instructions are furnished with the antenna kit.

RECEIVER—The Receiver must be installed under the cowl on the dash. Be sure that in the location selected, there is ample foot room and that the Receiver does not interfere with the operation of the pedals and ventilators. The Receiver can usually be installed on the left side of the dash, above the steering column. (Figure 3 shows a typical installation on the left side). The Receiver can also be installed on the right side of the dash, or in the center. The control couplings on the end of the Receiver housing must always be toward the center of the car.

A cardboard template is furnished so that the mounting bolt hole locations can be easily and accurately marked on the dash. The Receiver fastens to the dash with two "Tee" bolts. (See Figure 1). Drill two $\frac{7}{16}$ inch holes and loosely assemble the "Tee" bolts. Install the Receiver on the dash, hooking the "Tee" bolts in the brackets on the Receiver. Tighten the Receiver securely in place.

When drilling the holes in the dash, care should be taken not to drill through any tubing or cables that are strapped to the dash in the motor compartment.

CONTROL UNIT—The standard control unit fastens to the bottom edge of the instrument board. (Figure 3 shows a typical installation). Drill two holes in the instrument board flange in the desired location and fasten the control mounting bracket securely by means of bolts and nuts. Seat the volume control shaft end in the proper bushing on the Receiver housing and fasten the shaft casing nut securely. (See Figures 2 and 3). Before coupling the tuning control shaft to the Receiver, turn the tuning control knob counter-clockwise to the mark below 55 on the scale. To couple the shaft, turn the knob counter-clockwise slowly until the shaft end is seated in the bushing and tighten the knurled casing nut securely with the fingers.

To adjust the setting of the control unit, after coupling the flexible shaft to the Receiver, turn the tuning control knob counter-clockwise as far as possible.

Complete instructions for installing the "customed" controls are packed with these control units.

"A" BATTERY CONNECTIONS—Place the fuse and fuse insulator in the metal fuse housing in the control "A" lead. Couple this to the short Receiver lead and then connect the other "A" lead to the ammeter stud on the rear of the instrument board.

ANTENNA CONNECTIONS—When the radio is installed in a car having a top screen antenna, an under-car antenna, spare wheel antenna or an antenna having a similarly low capacitance (50 mmfd. to 450 mmfd.) — **PLACE THE "CONNECTOR PLUG" IN THE ANTENNA LEAD CONNECTOR AND THEN PLUG THE ANTENNA LEAD INTO THE ANTENNA LEAD CONNECTOR.** (See Figure 2).

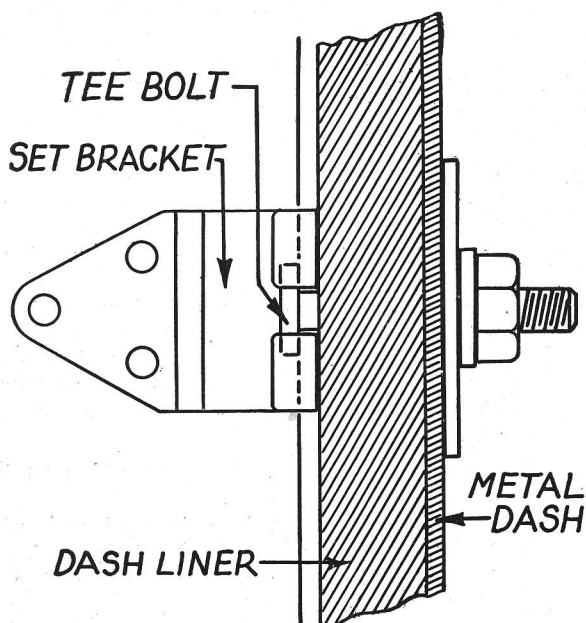


FIGURE 1

When the radio is installed in a car having a metal insert top antenna, insulated door antenna, insulated trunk cover or an antenna having a similarly high capacitance (450 mmfd. to 2500 mmfd.) PLACE THE "CONDENSER CONNECTOR" IN THE ANTENNA LEAD CONNECTOR AND THEN PLUG THE ANTENNA LEAD INTO THE ANTENNA LEAD CONNECTOR.

TONE CONTROL CONNECTION—The tone control switch is on the bottom of the standard control unit. Connect the black lead from the tone control switch to the Receiver. The location of the tone control connector is shown in Fig. 2.

ANTENNA COUPLING ADJUSTMENT—Turn on the radio and tune in a *weak broadcast signal at approximately 75* on the control scale. The volume control should be turned well up. With a small screw driver, adjust the antenna coupling condenser for the maximum signal.

MOTOR INTERFERENCE SUPPRESSION—Remove the coil-to-distributor high tension lead from the distributor. Cut two inches from the end of the lead and screw on the distributor resistor. Then plug the distributor resistor into the distributor cap.

While the standard distributor resistor can be used in most cases, there will be occasions when it will be necessary to use a double end screw type resistor (Part No. 4851) in the coil-to-distributor high tension lead, close to the distributor. Cars equipped with two ignition coils require two distributor resistors. Extra resistors can be obtained from the nearest Philco dealer or distributor.

Two interference condensers are furnished — one must be connected to the generator side of the cut-out, the other to the battery side of the primary of the ignition coil or to the ignition switch. The condenser bracket must be fastened securely to a grounded metal part of the car. The condenser on the generator usually can be fastened to the generator housing under the same screw that holds the cut-out, while the coil condenser can usually be fastened under the coil mounting bolts.

In some cases, it may be necessary to connect an additional condenser to the ammeter or to the dome light lead at the corner post. On some cars, a condenser can be used to advantage on the electric oil gauge or on the gas gauge. Connect the condenser to the terminal of the gauge and bolt the condenser securely to the frame or some other grounded part of the car.

Interference from electric clocks can be eliminated by connecting an interference condenser to the ammeter terminal.

Thirty inches of $\frac{1}{2}$ " copper braid is furnished for use as round straps as required.

In some particularly stubborn cases, bonding the steering column to the dash with a short lead will be effective. Clean the paint from the steering column at the dash where it enters the motor compartment and solder on a short piece of braid, grounding this to the dash.

In other cases it may be necessary to ground the tubing and rods coming thru the dash in order to reduce the interference. (See Figure 4). Clean them with emery cloth and spot solder the braid, fastening the end under a convenient screw. When an under-car antenna is used it may be necessary to ground the exhaust pipe to the frame of the car with a piece of copper braid. The ground connection should be made ahead of the dash.

There may be some interference caused by an excessive gap between the distributor rotor and the high-tension contacts. This can be overcome by lengthening the contact end of the rotor. Place the metal end of the rotor on a steel block and peen or hammer it with a small machinist's hammer. Dress the end with a file so that it retains its original shape. The rotor should not brush or wipe the contacts, but should just clear them.

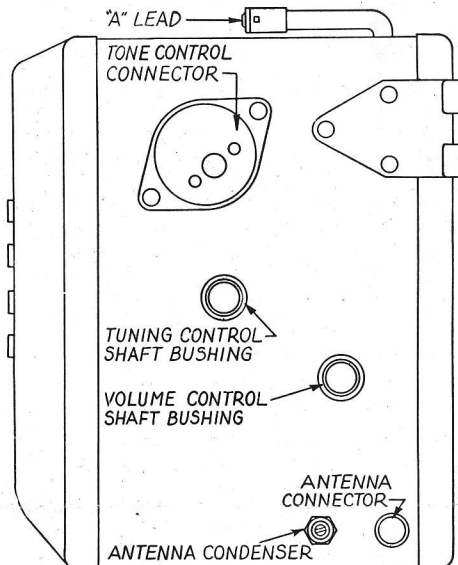


FIGURE 2

If the installation has been made carefully and the usual precautions observed, it should not be necessary to use spark plug resistors. In the event these operations do not reduce ignition disturbances to a satisfactory level, spark plug resistors should be installed. These can be obtained from the nearest Philco dealer or distributor.

OPERATION

The radio switch is in the center of the standard control above the dial opening. The "off" position is to the right, the "on" position to the left. The left-hand knob controls the volume, the right-hand knob the tuning. The tone control switch is in the center of the control at the bottom. The "bright" position is to the left, the deep or bass position is to the right.

The location of the switches and control knobs on the "customized" controls, is given in the special instructions packed with the control units.

Turn the radio "on." Allow the tubes to heat up, then adjust the volume control and tune in the various programs.

The numbers on the dial are channel numbers which, with the addition of "0" to the number correspond to the frequency in kilocycles. Adjust the volume to a suitable level and recheck the tuning. The Receiver must be tuned so that the maximum signal is obtained. Since the Receiver is extremely selective, it is of the utmost importance that the Receiver be tuned right on the station. Careless tuning off to one side even though the signal is still heard, results in very poor tone quality and very mushy reception. The tone control should be adjusted to the tone most pleasing. Speech is usually clearest when in the bright position while orchestras may sound best with the control in the deep position.

Another use of the tone control is as a static modifier. When driving through extremely noisy locations, the tone control should be set on mellow. This will subdue the harsh, rasping static.

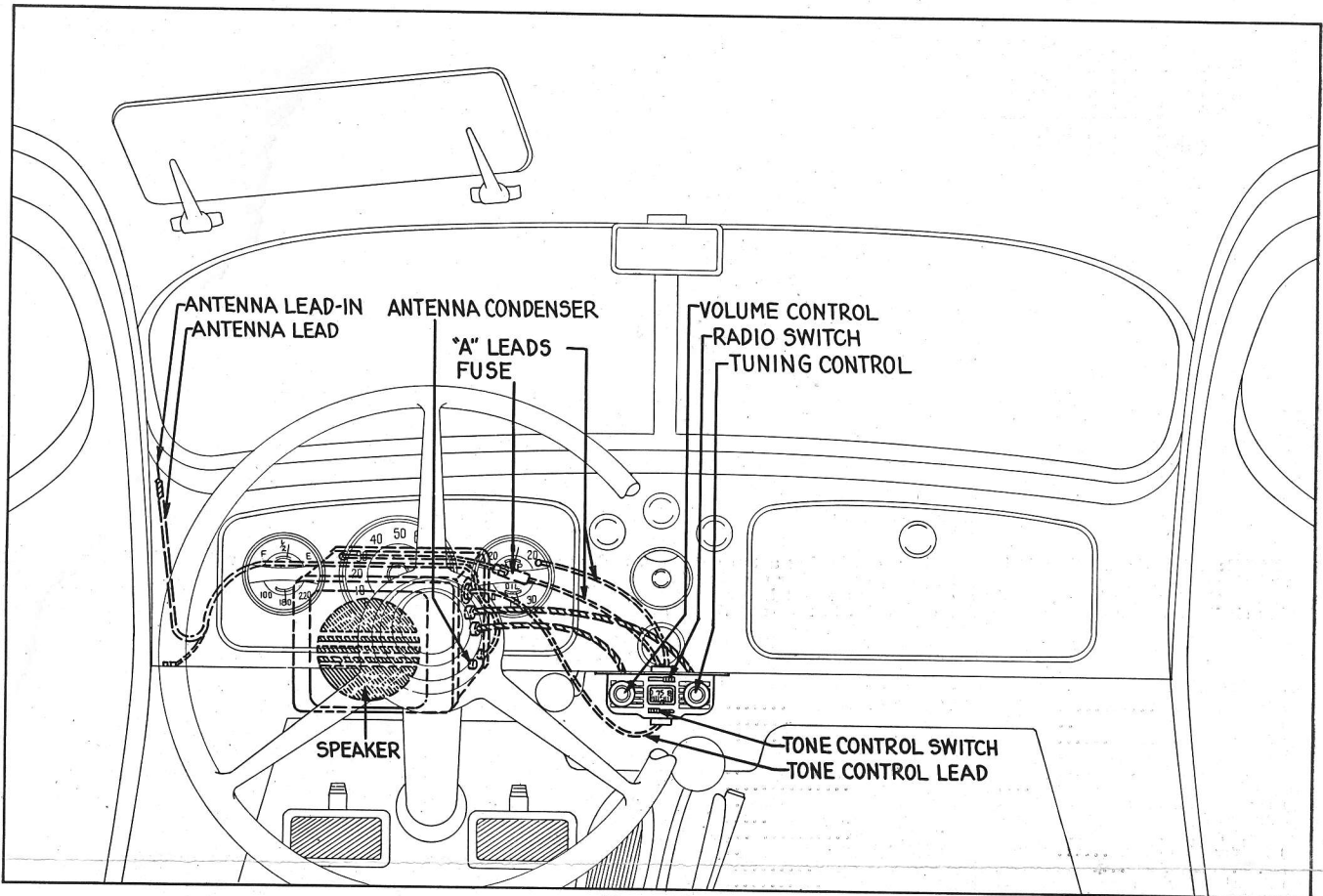


FIGURE 3

Except on very weak signals, the automatic volume control maintains the same volume level while driving along without continually manipulating the manual volume control, cuts out external interference, counteracts fading and prevents blasting of local stations while tuning. It is virtually impossible, however, to maintain satisfactory reception while driving under bridges or in places which are totally shielded, known as dead spots.

MAINTENANCE AND SERVICE

The Receiver is fully covered by the Standard Warranty (see below). Read it carefully. Should this Receiver or the Receiver installation ever require attention, go immediately to your dealer or to the service station that made the installation for efficient service.

The installation record should be filled out by your dealer at the time the installation is made. Keep the record for your protection in case you ever do require service.

REPLACEMENT TUBES—Use only PHILCO High Efficiency Tubes for replacements.

REPLACEMENT PARTS—Use only genuine PHILCO replacements parts. Don't jeopardize the performance of your Receiver by using inferior parts.

DO NOT ATTEMPT TO ADJUST THE VIBRATOR—If service is ever required, go to your dealer or to the nearest authorized Philco Auto Radio Service Station.

REMOVE PAINT FROM UNDER SCREW HEAD

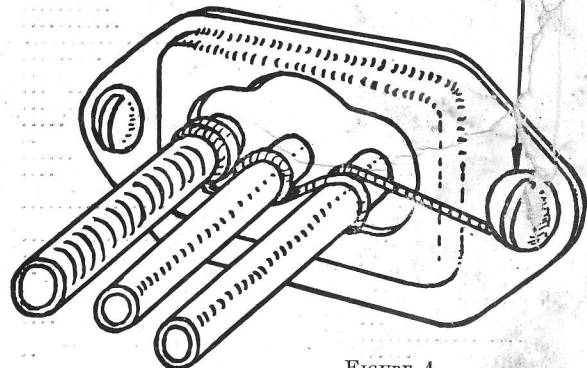


FIGURE 4

STANDARD WARRANTY

We warrant each new Radio Receiver and Speaker manufactured by us to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our factory or factory depots any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original purchaser, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any

representative or other person to assume for us any other liability in connection with the sale of our Receivers or Speakers. This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of our factory or factory depot, in any way so as, in our judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.

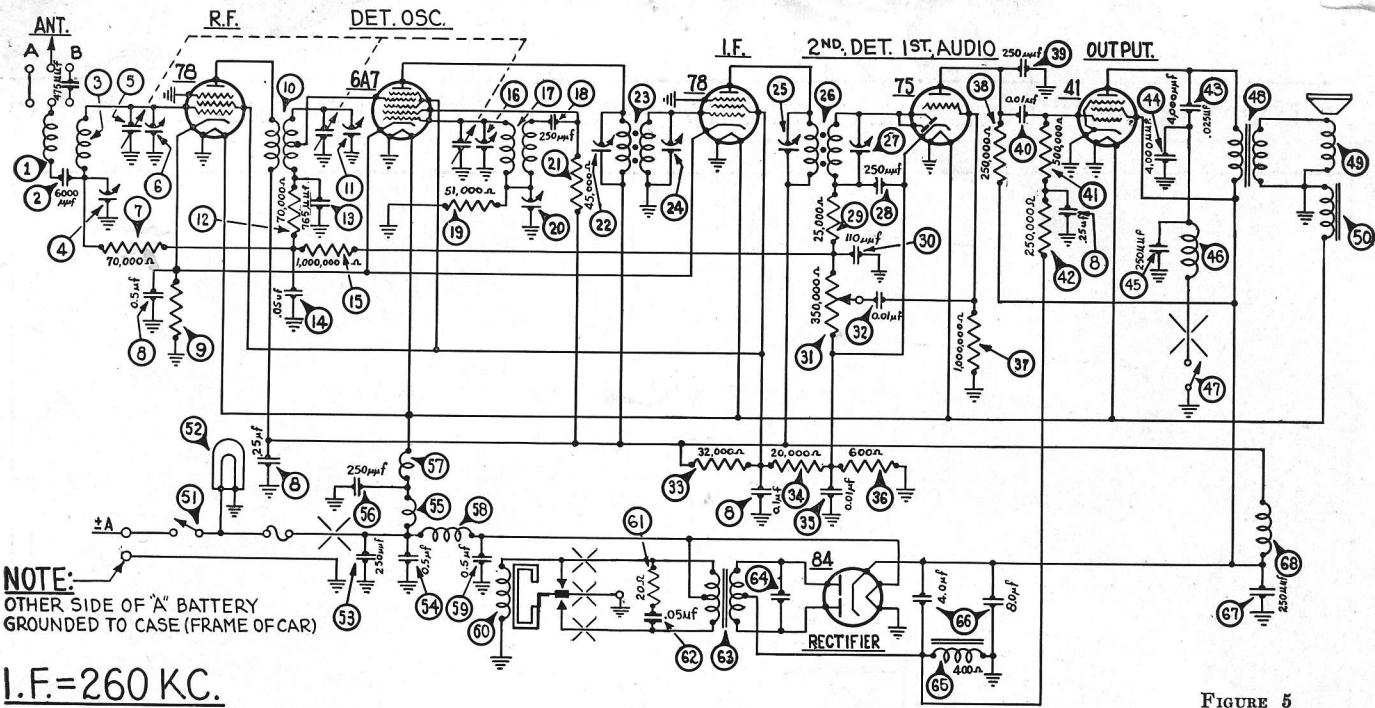


FIGURE 5

NOTE: When the Receiver is installed in a car having a top antenna a, under-car antenna, spare wheel antenna or antenna having a similarly low relative capacitance (50 mmf. to 450 mmf.) use connector plug in "A."
 When the Receiver is installed in a car having a metal insert top antenna, insulated door antenna, insulated trunk cover antenna or antenna having similarly high relative capacitance (450 mmf. to 2500 mmf.) use c ondenser plug in "B."

MODEL 817 — PARTS LIST

No.	Description	Part No.	No.	Description	Part No.
1	Antenna Choke	38-7516	48	Output Transformer	32-7495
2	Condenser (6,000 mmfd.)	30-4445	49	Cone and Voice Coil	36-3586
3	Antenna Transformer	32-1984	50	Field Coil Assembly	36-3597
4	Antenna Coupling Condenser	31-6082	51	On and Off Switch (B-C-P)	42-1159
5	Tuning Condenser	31-1769	52	On and Off Switch (817)	42-1160
6	First Padder (on tun. cond.)	33-370334	53	Pilot Lamp	34-2040
7	Resistor (70,000 ohms)	33-370334	54	Condenser (250 mmfd.)	30-1032
8	Condenser (.1-25-.25-.5 mfd.)	30-4415	55	Condenser (.5 mfd.)	30-4015
9	Resistor (450 ohms)	33-1218	56	"A" Choke	32-1432
10	P. F. Transformer	32-1985	57	Condenser (250 mmfd.)	30-1032
11	Second Padder (on tun. cond.)	33-370334	58	Filament Choke	32-2038
12	Resistor (70,000 ohms)	33-370334	59	Vibrator Choke	32-2039
13	Condenser (765 mmfd.)	30-1069	60	Condenser (.5 mfd.)	30-4015
14	Condenser (.05 mfd.)	3615-08G	61	Vibrator	41-3170D
15	Resistor (1,000,000 ohms)	33-510344	62	Resistor (20 ohms)	33-020133
16	Third Padder (on tun. cond.)	33-510344	63	Condenser (.05 mfd.)	30-4444
17	Oscillator Transformer	32-1986	64	Power Transformer	32-7550
18	Condenser (250 mmfd.)	30-1032	65	Condenser (7500 mmfd.)	30-4420S
19	Resistor (51,000 ohms)	33-351344	66	Filter Choke	32-7545
20	Low Frequency Padder	31-6083	67	Filter Condenser (4-8 mfd.)	30-2150
21	Resistor (45,000 ohms)	33-345344	68	Condenser (250 mmfd.)	30-1032
22	Padder (Pri. 1st I. F. Trans.)	32-2026	69	"B" Choke	32-1281
23	Padder (Sec. 1st I. F. Trans.)	32-2026	70	Four Prong Socket	27-6044
24	Padder (Pri. 2nd I. F. Trans.)	32-2027	71	Five Prong Socket	27-6035
25	Padder (Sec. 2nd I. F. Trans.)	32-2027	72	Six Prong Socket	27-6036
26	Condenser (250 mmfd.)	30-1032	73	Seven Prong Socket	27-6037
27	Resistor (25,000 ohms)	33-325344	74	Condenser Plug	30-4412
28	Condenser (110 mmfd.)	30-1031	75	Connector Plug	29-6423
29	Volume Control	33-5148	76	Plug Insulator	27-8199
30	Condense. (.01 mfd.)	3903-0SU	77	Fuse	7227
31	Resistor (32,000 ohms)	33-332434	78	Fuse Insulator	27-7729
32	Resistor (20,000 ohms)	33-320334	79	"Tee" Bolt (Rec. Mtg.)	28-6161
33	Condenser (.01 mfd.)	3903-0SG	80	Nut (Rec. Mtg.)	W518A
34	Resistor (600 ohms)	33-1212	81	Speaker (Model CB)	36-1203
35	Resistor (1,000,000 ohms)	33-510344	82	Pilot Lamp Assembly	38-7774
36	Resistor (250,000 ohms)	33-424344	83	Tuning & Volume Shaft	28-8495
37	Condenser (250 mmfd.)	30-1032	84	Distributor Resistor	33-1196
38	Condenser (.01 mfd.)	3903-0SU	85	Interference Condenser	30-4007
39	Resistor (500,000 ohms)	33-449344	86	Bracket (Control Mtg.)	(817)
40	Resistor (250,000 ohms)	33-424344	87	Antenna Shield Assembly	(817)
41	Condenser (.025 mfd.)	7653-0SU	88	Control Assembly (817)	42-5536
42	Condenser (4000 mmfd.)	30-4185	89	Control Assembly (Buick)	42-5561
43	Condenser (250 mmfd.)	30-1032	90	Control Assembly	(Chevrolet and Pontiac)
44	Choke	32-2063	91	Scale Assembly (817)	42-5539
45	Tone Control Switch	42-1160	92	Scale Assembly	(Buick and Chevrolet)

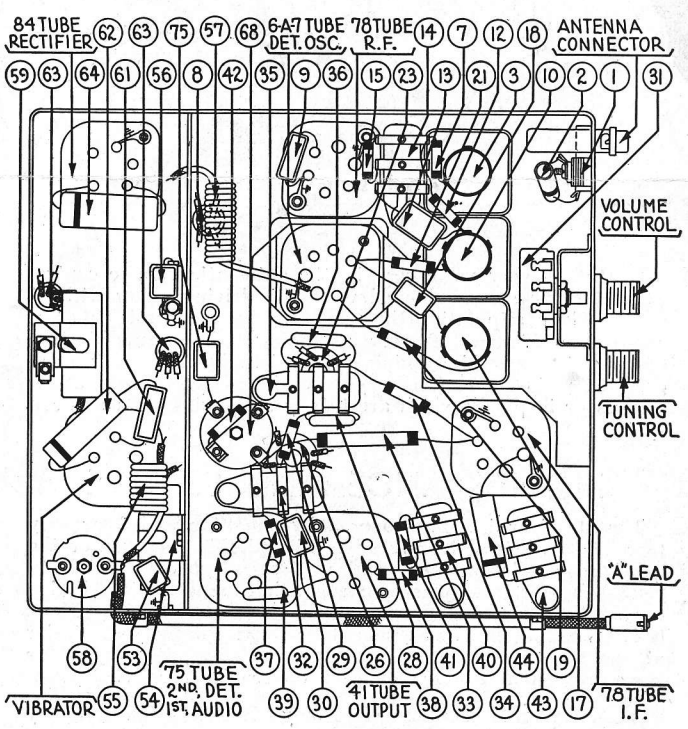


FIGURE 6

Scale Assembly (Pontiac) ..42-5540
 Tuning and Volume Knob (Pontiac) ..27-4299
 Tuning and Volume Knob (817 Buick and Chevrolet) 27-4288
 Knob Base (B-C-P) ..28-3698

TRANSITONE AUTOMOBILE RADIO CORP. PHILADELPHIA, PA.

Model 817 — Installation Registration

Receiver Serial No. Date

Installed by Make and Year of Car

Owner's Name Owner's Address

KEEP THIS INSTALLATION RECORD. IT IS IMPORTANT IN CASE YOU EVER REQUIRE SERVICE.