

INSTALLATION AND OPERATING INSTRUCTIONS

MODELS 819 and 819H

THE PHILCO AUTO RADIO MODELS 819 and 819H are Philco's newest DeLuxe radios. They are a highly developed super-heterodyne with a large, separate, electro-dynamic speaker for installation on the dash, and all modern features required in such DeLuxe instruments. The Model 819H is equipped with an additional, electro-dynamic speaker for installation on the header-bar above the wind-shield. This unique use of two electro-dynamic speakers, one on the dash, the other overhead, gives better reproduction and sound distribution in an automobile than has ever been obtained before.

THIS 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 and the new, improved full-wave Philco Vibrator are housed in a rugged, compact, fully shielded container, designed especially for quick and easy installation on the dash of all automobiles with two "Tee" bolts. The installation in most cars can be made easily above the steering column. A separate attractive metal housing forms the grille as well as a very effective baffle for the extremely powerful Philco electro-dynamic speaker, which can also be installed very easily on the dash. The metal housing of the overhead speaker is finished in a neutral shade to match the interior car finish and is equipped with an adjustable mounting bracket, so that the speaker can be installed in practically all cars.

All tubes used are the latest Philco high-efficiency tubes, designed especially for automobile radio. Some of these tubes

each 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.

The front panel of the Receiver is easily removed so that tubes and vibrator are accessible for service.

Philco's system of automatic volume control used in this Receiver gives smooth elastic control, counteracts fading while driving along, and prevents blasting of local stations.

The push-pull output stage is capable of delivering tremendous volume without distortion while the full range tone control permits the selection of the tone most pleasing.

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" 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. The radio switch, tuning control, volume control, tone control and sensitivity switch are all right at the finger tips on the control unit.

There are only two connections to make, one to the antenna, and 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 must be 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 AND DASH SPEAKER INSTALLATION—The Receiver and Speaker must be installed under the cowl on the dash. Be sure that in the location selected, there is ample foot room and that they do not in any way interfere with operation of the control pedals and ventilators. The Receiver can be installed on the right side of the dash, in the center or on the left side, above the steering column, while the Speaker can be installed on the dash on one side of the Receiver. Figure 3 shows a typical installation with the Receiver on the left side.

Cardboard templates are provided 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 7/16 inch holes and loosely assemble the "Tee" bolts. Install the Receiver on the dash hooking the "Tee" bolts into the brackets on the Receiver. Tighten the Receiver securely in place.

The speaker fastens to the dash with two studs. Screw the two studs into the back of the speaker and bolt it securely in place.

OVERHEAD SPEAKER INSTALLATION—Take out the adjustment screws on the side of the speaker housing. Fit the speaker in place against the headlining with the adjustable mounting bracket flush against the header-bar in the center above the windshield. Then pull the bracket out as far as possible so that it can be used as a template for marking the location of the mounting screw holes. Drill four holes in the metal header-bar brace, using a No. 29 drill, and fasten the

bracket securely to the header with four No. 8 slotted hex-head self-tapping screws.

Place the rubber grommet on the speaker cable about six inches from the terminal end. The colors of the wires in the speaker cable correspond with the color marks on the speaker panel terminals to which they must be connected. After the cable is connected to the speaker, the grommet should be placed in the "U" slot in the edge of the speaker housing. Push the speaker against the headlining and tighten the adjustment screws on the side of the speaker housing.

The cable should be dressed in back of the upper edge of the header-bar trim and brought over to the right corner post. Dress the cable down along the windshield moulding, fastening with cable clips wherever required. Connect the speaker plug into the outlet in the side of the dash speaker housing. Dress the slack cable and fasten in place.

On some of the 1935 and 1936 cars, there is a fish wire in the front corner post for drawing the overhead speaker cable up the corner post and across the front, in back of the header panel. On General Motors cars, the fish wire is brought down the left corner post and is fastened at the top in the center, behind the header. Gently pull down the top edge of the header trim. This will expose the end of the fish wire which can then be used for drawing the speaker cable up the left corner post.

CONTROL UNIT—The 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 shift 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.

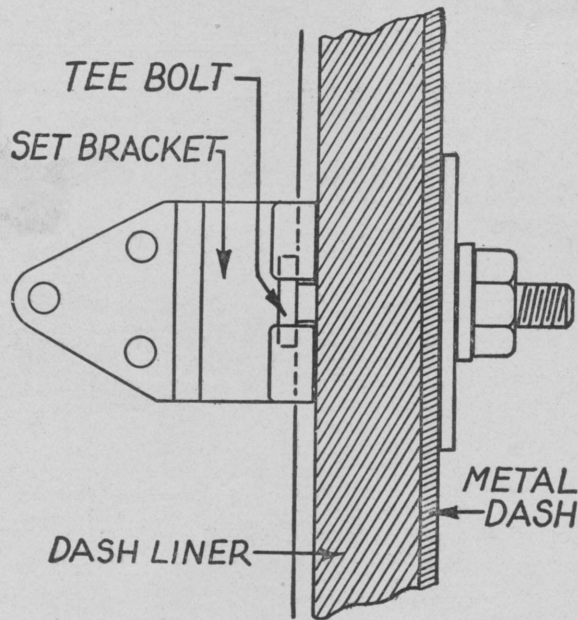


FIGURE 1

"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).

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.

LOCAL-DISTANCE SWITCH CONNECTION—The local-distance switch is on the bottom of the control head. Connect the black lead coming from the switch to the Receiver. The location of the local-distance 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. For the location of the coupling condenser see Figure 2.

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 ground 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.

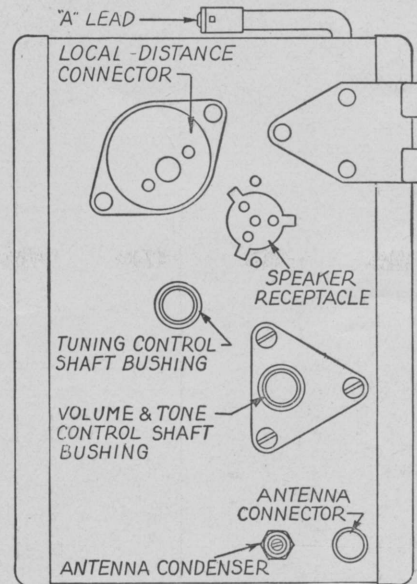


FIGURE 2

There may be some interference caused by an excessive gap between the distributor rotor and the high-tension contacts. This can be over-come 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.

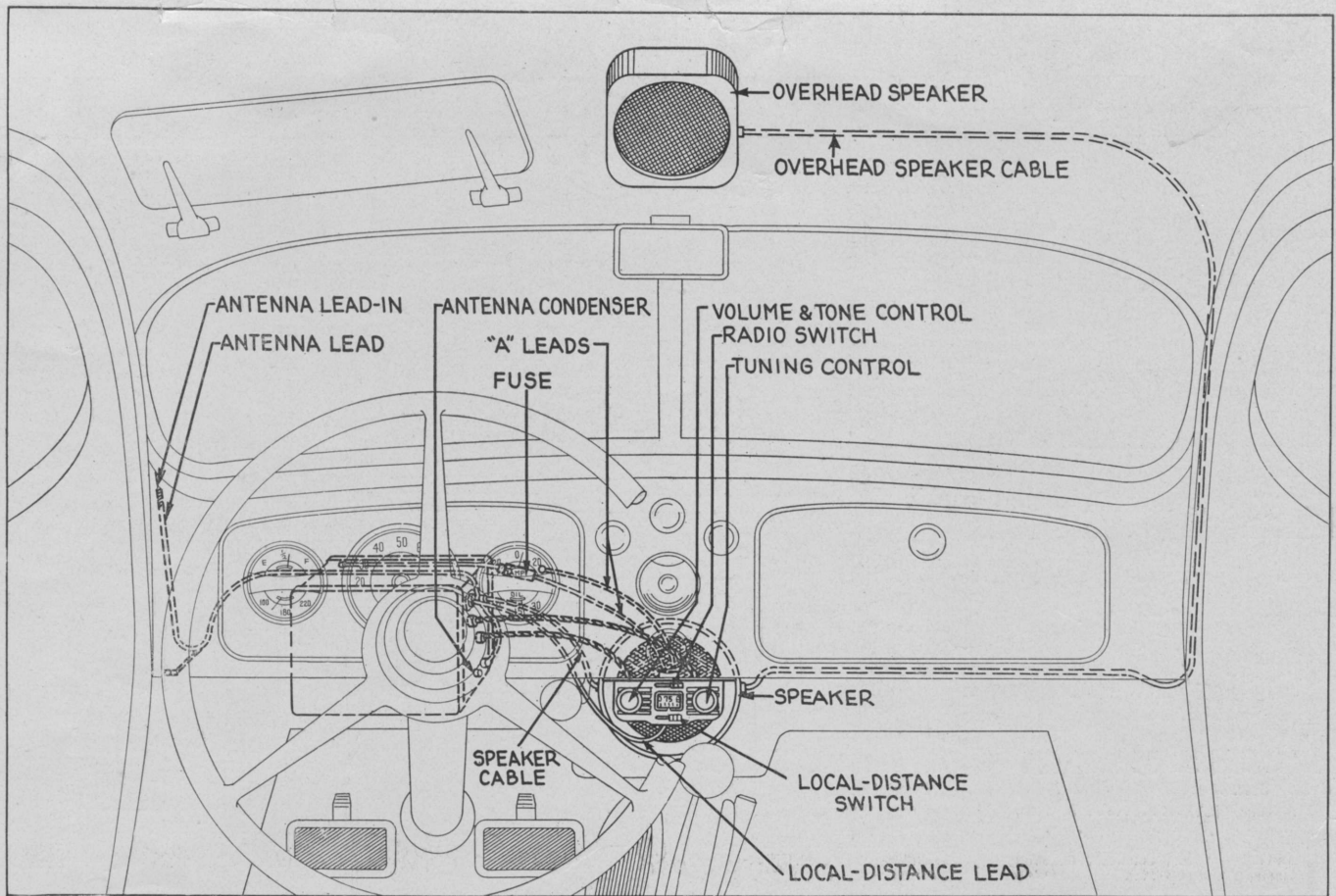
If the installation has been made carefully and the usual precautions observed, it should not be necessary to use spark plug resistors. In the event these operations do not reduce ignition disturbances to a satisfactory level, spark plug resistors should be installed. These can be obtained from the nearest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

OPERATION

The radio switch is in the center of the 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 and tone, the right-hand knob the tuning. The local-distance switch is in the center of the control at the bottom.

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 re-check 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.



Model 819 use the Dash Speaker only.

Model 819H use both the Dash Speaker and the Overhead Speaker.

FIGURE 3

To operate the tone control, pull out on the volume control knob. This disengages the volume control and engages the tone control. Turning the knob clockwise increases the high notes while turning counter-clockwise emphasizes the bass. Speech is usually clearest when the control is in the bright or brilliant position, while orchestras will sound best with the control set for more bass. After adjusting to the tone most pleasing, release the knob to restore the volume control action.

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

When in the immediate vicinity of power lines or car lines, considerable man-made static or interference may be picked up. This man-made static as well as atmospheric static, is amplified along with the radio signal, but the effects of it can be minimized by tuning the Receiver to bring in the most powerful local station. Since the powerful local signal requires less amplification than other weaker signals, the automatic volume control in the Receiver reduces the amplification and enables the program to be received without most of the undesirable noises.

To make this further effective, the "local-distance" switch is provided in the Models 819 and 819H. The "distance" position of the switch (in control head) is to the right, the "local" position to the left.

When the switch is in the "local" setting, the sensitivity of the Receiver is reduced and much quieter reception is attained.

With the switch in the "distance" setting, the Receiver is restored to its full sensitivity.

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.

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 and

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.

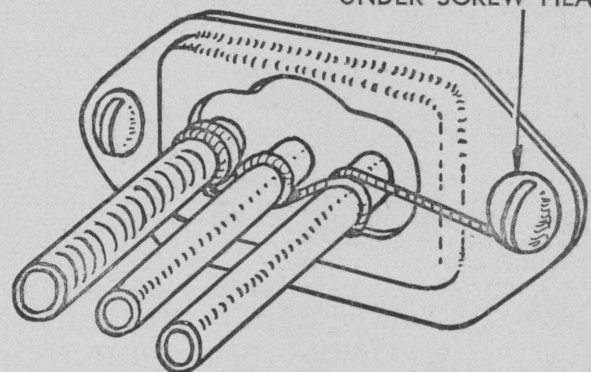
The installation record should be filled out by your dealer at the time the installation is made. Keep the record for your protection in case you ever do require service.

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

REPLACEMENT PARTS—Use only genuine PHILCO replacement 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



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 depots 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.

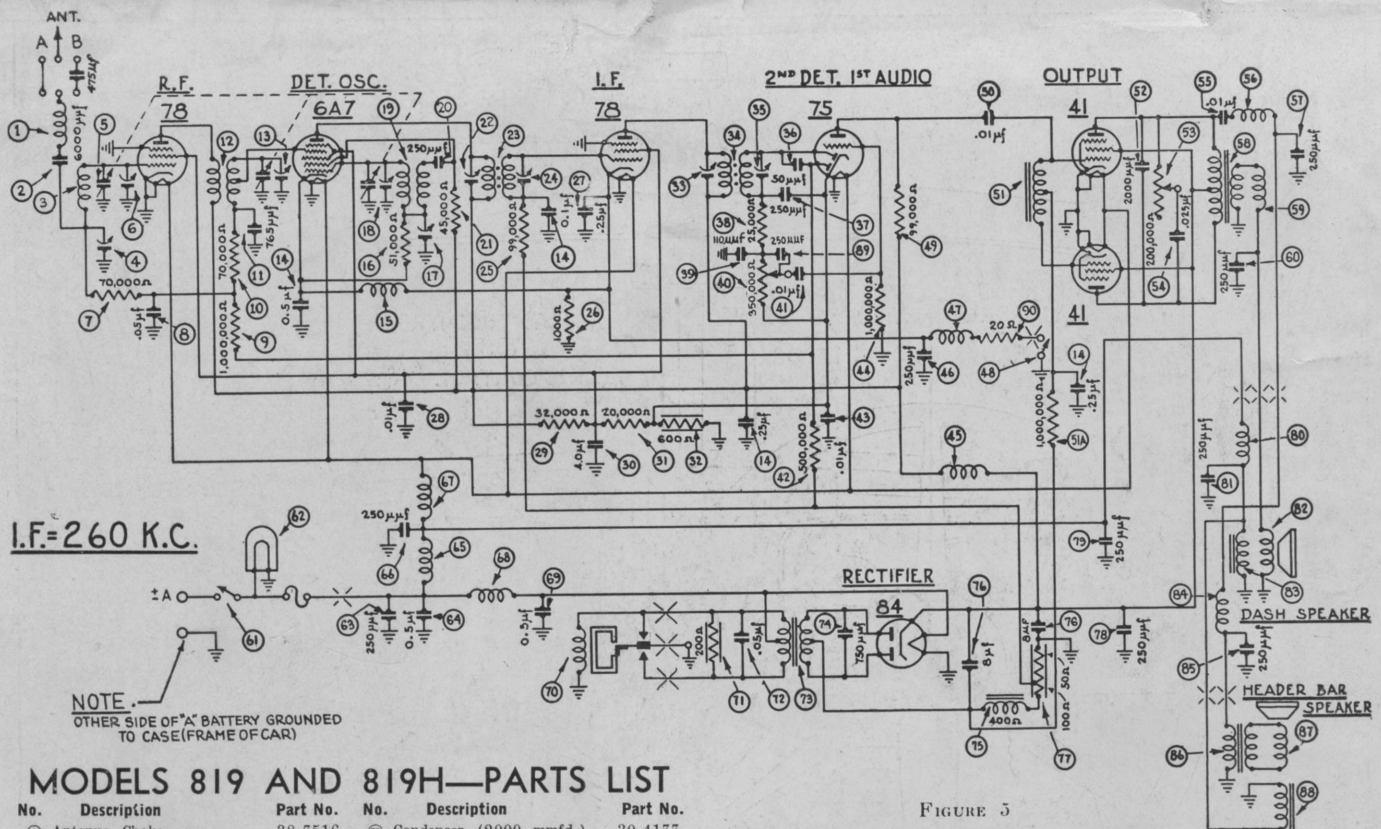


FIGURE 5

MODELS 819 AND 819H—PARTS LIST

No.	Description	Part No.	No.	Description	Part No.
1	Antenna Choke	38-7516	50	Condenser (2000 mmfd.)	30-4177
2	Condenser (6000 mmfd.)	30-4125	51	Tone Control (200,000 ohms)	33-5150
3	Antenna Transformer	32-1984	52	Condenser (.025 mfd.)	7653-OSU
4	Antenna Coupling Condenser	31-6082	53	Condenser (.01 mfd.)	30-4381
5	Tuning Condenser	31-1769	54	Choke	32-1930
6	First Padder (on tun. cond.)	31-1769	55	Condenser (250 mmfd.)	30-1032
7	Resistor (70,000 ohms)	33-370334	56	Output Transformer	32-7551
8	Condenser (.05 mfd.)	3615-OSG	57	Choke	32-1930
9	Resistor (1,000,000 ohms)	33-510344	58	Condenser (250 mmfd.)	30-1032
10	Resistor (70,000 ohms)	33-370334	59	On-Off Switch Assembly	42-1160
11	Condenser (765 mmfd.)	30-1069	60	Pilot Lamp	34-2039
12	R. F. Transformer	32-1985	61	Condenser (250 mmfd.)	30-1032
13	Second Padder (on tun. cond.)	31-1769	62	Condenser (.5 mfd.)	30-4015
14	Condenser (1.25-.25-.5 mfd.)	30-4415	63	"A" Choke	32-1432
15	Choke	32-2063	64	Condenser (250 mmfd.)	30-1032
16	Resistor (51,000 ohms)	33-351344	65	Filament Choke	32-2038
17	Low Frequency Padder	31-6083	66	Vibrator Choke	32-2039
18	Third Padder (on tun. cond.)	31-1769	67	Condenser (.5 mfd.)	30-4015
19	Oscillator Transformer	32-1986	68	Vibrator	41-3170D
20	Condenser (250 mmfd.)	30-1032	69	Resistor (200 ohms)	33-1210
21	Resistor (45,000 ohms)	33-345344	70	Condenser (.05 mfd.)	30-4020
22	Padder (Pri. 1st I. F. Trans.)	33-370334	71	Power Transformer	32-7550
23	First I. F. Transformer	32-2050	72	Condenser (750 mmfd.)	30-4420
24	Padder (Sec. 1st I. F. Trans.)	33-370334	73	Filter Choke	32-7545
25	Resistor (99,000 ohms)	33-399344	74	Filter Condenser (8-8 mfd)	30-2152
26	Resistor (1,000 ohms)	33-210334	75	Resistor (100-50 ohms)	33-3238
27	Condenser (.25 mfd.)	30-4146	76	Condenser (250 mmfd.)	30-1032
28	Condenser (.01 mfd.)	30-4124	77	Condenser (250 mmfd.)	30-1032
29	Resistor (32,000 ohms)	33-332434	78	Choke	32-1644
30	Condenser (4 mfd.)	30-2151	79	Condenser (250 mmfd.)	30-1032
31	Resistor (20,000 ohms)	33-320334	80	Cone and Voice Coil	36-3159
32	Resistor (600 ohms)	33-1212	81	Field Coil Assembly	36-3513
33	Padder (Pri. 2nd I. F. Trans.)	33-370334	82	Choke	32-2038
34	Second I. F. Transformer	32-2034	83	Condenser (250 mmfd.)	30-1032
35	Padder (Sec. 2nd I. F. Trans.)	33-370334	84	Output Transformer	32-7507
36	Condenser (50 mmfd.)	30-1029	85	(overhead speaker)	32-7507
37	Condenser (250 mmfd.)	30-1032	86	Cone and Voice Coil	36-3526
38	Resistor (25,000 ohms)	33-325344	87	(overhead speaker)	36-3526
39	Condenser (110 mmfd.)	30-1031	88	Field Coil Assembly	32-9236
40	Volume Control (350,000 ohms)	33-5149	89	Condenser (250 mmfd.)	30-1032
41	Condenser (.01 mfd.)	3903-OSU	90	Resistor (20 ohms)	33-020133
42	Resistor (500,000 ohms)	33-449344	91	Four Prong Socket	27-6044
43	Condenser (.01 mfd.)	3903-OSG	92	Five Prong Socket	27-6035
44	Resistor (1,000,000 ohms)	33-510344	93	Six Prong Socket	27-6036
45	"B" Choke	32-1281	94	Seven Prong Socket	27-6037
46	Condenser (250 mmfd.)	30-1032	95	Idle Gear	28-7176
47	Choke	32-2063	96	Pinion Gear	28-7178
48	Local-Distance Switch	42-1160	97	Dash Speaker (A37)	36-1207
49	Resistor (99,000 ohms)	33-399344	98	Dash Speaker Only	36-1212
50	Condenser (.01 mfd.)	3903-OSU	99	Overhead Speaker (AD)	36-1211
51	Audio Choke	32-7547	100	Control	42-5537
52	Resistor (1,000,000 ohms)	33-510344			

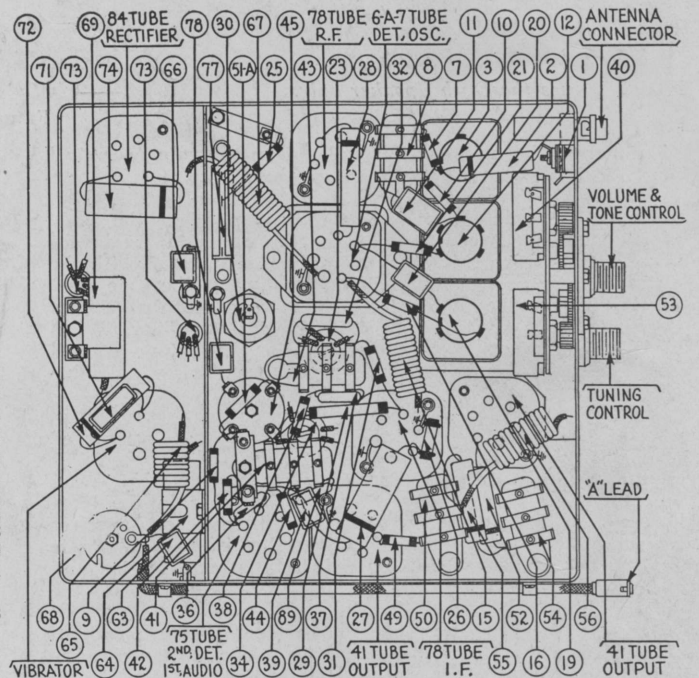


FIGURE 6

No.	Description	Part No.	No.	Description	Part No.
101	Pilot Lamp Assembly	38-7213	102	Antenna Condenser	30-4412
103	Tuning & Volume Knob	27-4288	103	Antenna Connector	29-6423
104	Tuning Shaft	28-8495	104	Fuse	7227
105	Volume Shaft	28-8499	105	Fuse Insulator	27-7729
106	Scale Assembly	42-5539	106	"Tee" Bolt (Rec. Mtg.)	28-6161
107	Distributor Resistor	33-1196	107	Nut (Rec. Mtg.)	W518A
108	Interference Condenser (.5 mfd.)	30-4007	108	Stud (Speaker Mtg.)	6122
			109	Nut (Speaker Mtg.)	W55A

TRANSITONE AUTOMOBILE RADIO CORP. PHILADELPHIA, PA.

Models 819 and 819H—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.