

# INSTALLATION AND OPERATING INSTRUCTIONS

## PHILCO

REG. U.S. PAT. OFF.

## TRANSITONE

## MODEL 809

**T**HE PHILCO TRANSITONE MODEL 809 is the new, two unit, highly developed superheterodyne Philco Auto Radio. It combines a large, separate electro-dynamic speaker of most recent design, with many other outstanding features.

The Receiver 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. A separate, attractive metal housing forms the grille as well as a very effective baffle for the powerful Philco electro-dynamic speaker which can also be installed very easily on the dash.

Philco's full range tone control permits the selection of the tone most pleasing to the user.

All tubes used, are the latest Philco high-efficiency tubes, designed especially for automobile radio. Several of these tubes each perform the functions which formerly required two and three tubes, thereby effecting a great tube economy, reducing the number of tubes necessary for satisfactory operation and also reducing the amount of current taken from the car battery to the very minimum.

Philco's system of automatic volume control used in this Receiver, not only gives that smooth elastic control which counteracts fading while driving along and prevents blasting of local stations, but also subdues the harsh interference usually present between stations.

The new Receiver is ALL ELECTRIC, operating entirely from the car battery system. The Full-Wave Philco Vibrator is built in as an integral part of the Receiver.

Interference filters to cut out the motor interference set up by the car ignition system and specially designed shielding make the Receivers especially easy to install.

The control unit can be conveniently installed on the steering column or on the instrument panel, in whichever location it is preferred. The control unit is attractive in design, has transverse dial illumination, three control knobs (tuning, volume, tone) and is equipped with a lock and key to prevent the unauthorized use of the radio.

There are only two connections to make — one to the car antenna, the other, to the ammeter stud. **THE NEW PHILCO AUTO RADIO — EASY TO INSTALL — A PLEASURE TO OPERATE.**

### GENERAL INSTALLATION

**ANTENNA**—In cars equipped with a top antenna, the antenna lead-in is usually brought down one of the windshield pillars and coiled behind the cowl trim panel. In such cases, the antenna lead (Receiver) must be spliced to the antenna lead-in as close as possible to the corner post and the shield pigtail on the lead grounded.

In cars having an all metal top, the Philco special under-car antenna should be installed (Part No. 45-1128 Kit). The shielded antenna lead, furnished with the kit must be brought up through the floor of the car and connected to the Receiver. Complete instructions are furnished with antenna kit.

**RECEIVER AND 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 the 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 one side of the Receiver. Fig 3 shows a typical installation with the Receiver on the left side.

The standard mounting for the Receiver is with three studs. Figure 1 shows a detailed view of the Receiver installed on the right side of the dash, using three studs for mounting the Receiver. When installed on the right side or the left side, the control coupling end of the Receiver must be towards the center of the dash. When installed in the center of the dash, the

control coupling end must be towards the control unit. Cardboard templates are furnished so that the mounting bolt hole locations can be easily and accurately marked on the dash.

The dash on some 1935 cars is drilled for two Receiver mounting bolts. An extra set of bolt holes is provided in the Receiver housing for installation in these cars.

Before installing the Receiver, turn the volume control coupling counter-clockwise as far as it will go.

**CONTROL UNIT**—The control unit can be fastened to the bottom edge of the instrument board or on the steering column. Figure 2 shows how the control and the mounting bracket must be assembled on the steering column. Figure 3 shows a typical installation of the control on the instrument board. When used in this manner, bolt the "L" bracket to the rear of the control. Drill two holes in the instrument board flange in the desired location and fasten the bracket securely to the instrument board.

Unlock the control unit and turn the volume control knob clockwise half a turn. Seat the volume control shaft end in the proper coupling on the Receiver housing and fasten the shaft casing nut securely. The volume control must be turned counter-clockwise as far as it will go. Then remove the knob and loosen the set screw in the shaft end. Turn the shaft counter-clockwise until the switch in the control head snaps "off." The control can now be locked with the key. Tighten the set screw and replace the knob.

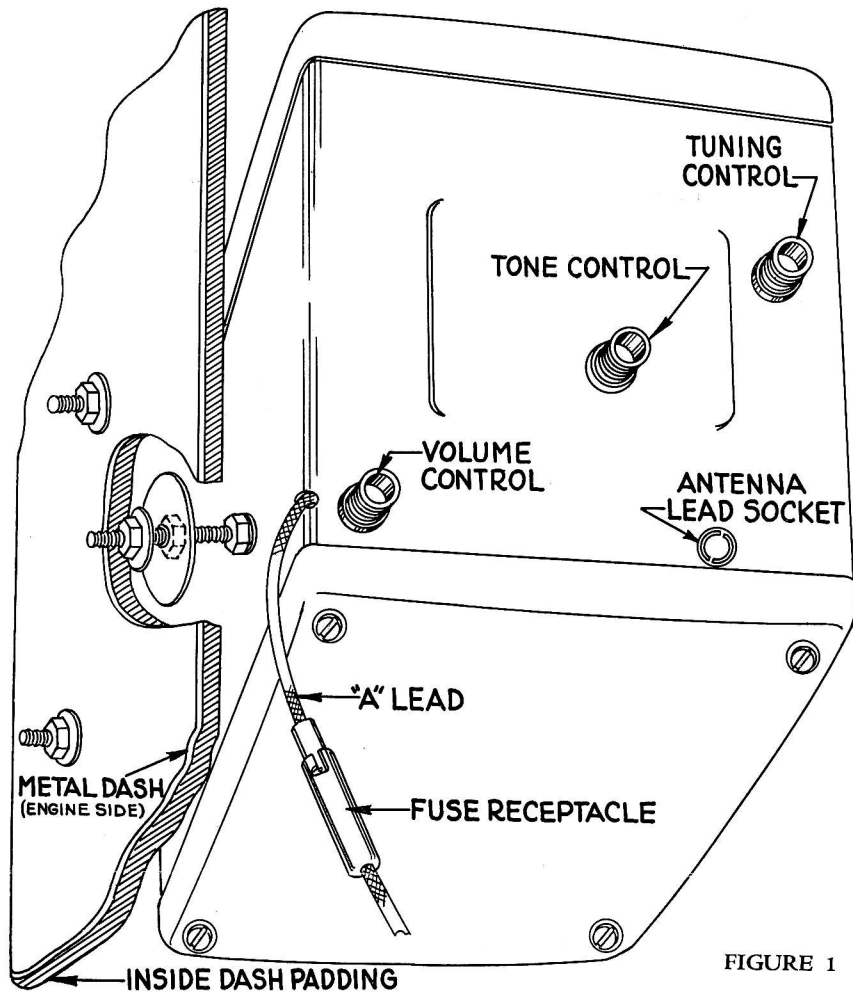


FIGURE 1

The tuning control and tone control flexible shafts must be coupled in their respective bushings on the Receiver housing. The knurled casing nuts must be securely tightened. Fig. 1 and Fig. 3 show the locations of the shaft bushings on the Receiver housing.

In case the control unit is mounted on the steering column and the Receiver is installed at the extreme right of the dash, it will be necessary to replace the standard 21" flexible shafts with 28" shafts and extend the "A" lead. A special kit, Part No. 45-1133 can be obtained in exchange for the standard shafts.

**CABLE 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.

The speaker cable must be connected into the socket on the speaker housing. The antenna lead must be connected in its socket on the end of the Receiver housing. (See Figures 1 and 3).

**FLEXIBLE SHAFT ADJUSTMENTS**—With the Receiver turned on for operation, tune in a broadcast station of known frequency. Remove the tuning knob and loosen the set screws on the shaft end. Turn the shaft until the control pointer indicates the proper channel (add "0" to the channel number for frequency in kilocycles). Tighten the set screws and replace the knob.

**STANDARD SUPPRESSION**—The standard spark plug resistors (33-1195) can be installed on the spark plugs of practically all cars. Likewise the distributor resistor (33-1196) can be connected in the high tension center lead to the distributor.

Disconnect the high tension leads to the spark plugs. Cut off the terminal end of the lead and screw the small elbow-type resistor on the lead. The resistor can then be snapped on the terminal of the spark plug. To avoid confusion when the leads cannot be identified easily, install the resistor and make all connections on one lead at a time.

Remove the coil to distributor high tension lead from the distributor head and cut the lead two inches from the end. Screw the resistor to the short end and then screw the resistor into the terminal of the lead to the distributor.

In case the spark plugs are not equipped with a suitable terminal, the standard ferrules can be obtained and placed on the plugs. Cars equipped with twin ignition require a spark plug resistor on each plug. Cars equipped with two ignition coils require two distributor resistors.

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.

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

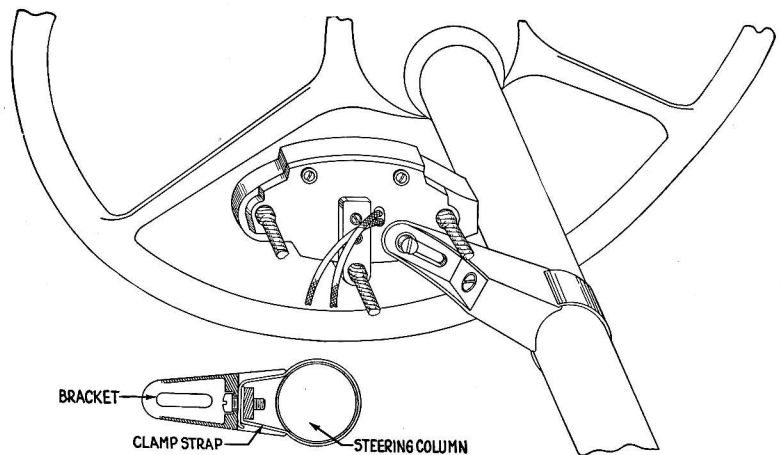


FIGURE 2

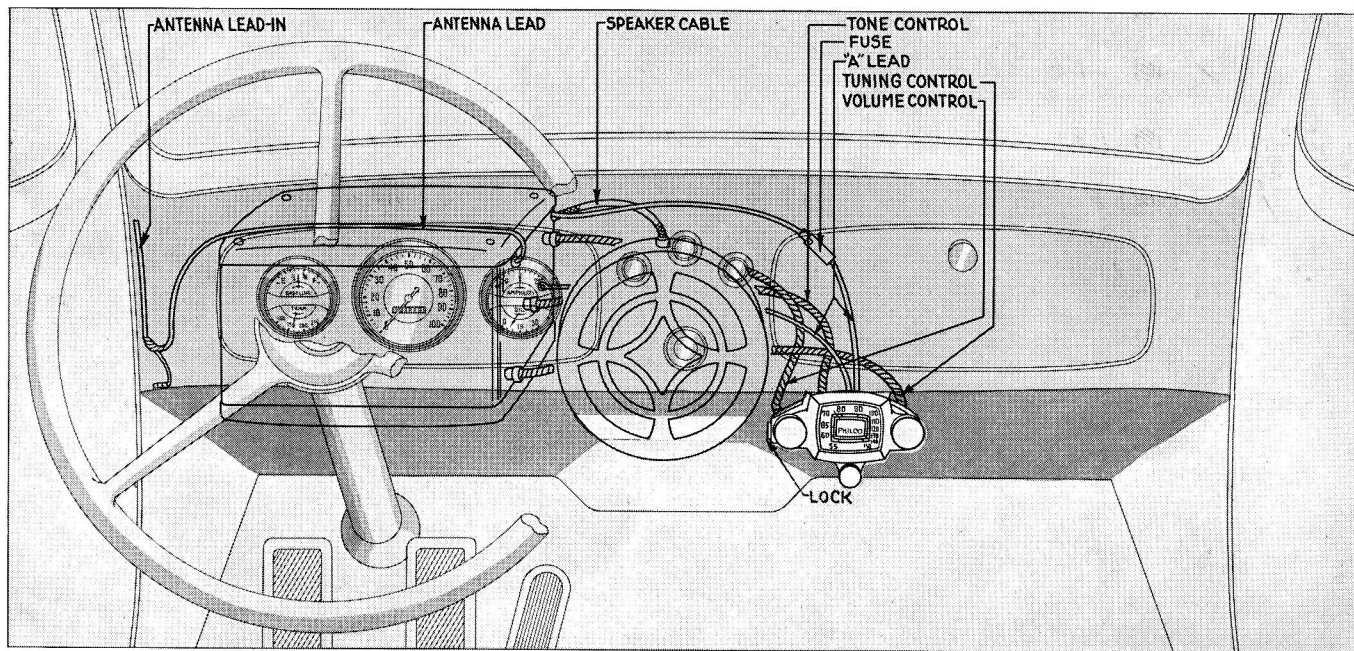


FIGURE 3

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.

## OPERATION

To operate the Receiver, the control must first be unlocked. The left-hand knob on the control is a combination switch and volume control. 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 right-hand knob (the station selector) to 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 full range tone control knob is on the control unit. Adjust this control to the tone most pleasing. Speech is clearest when the control is set for "brilliant" — while orchestras will usually sound best when the control is set for a deeper tone.

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

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.

The Receiver should be turned off by turning the volume control knob counter-clockwise until the switch clicks "off". The control can then be locked with the key.

## MAINTENANCE AND SERVICE

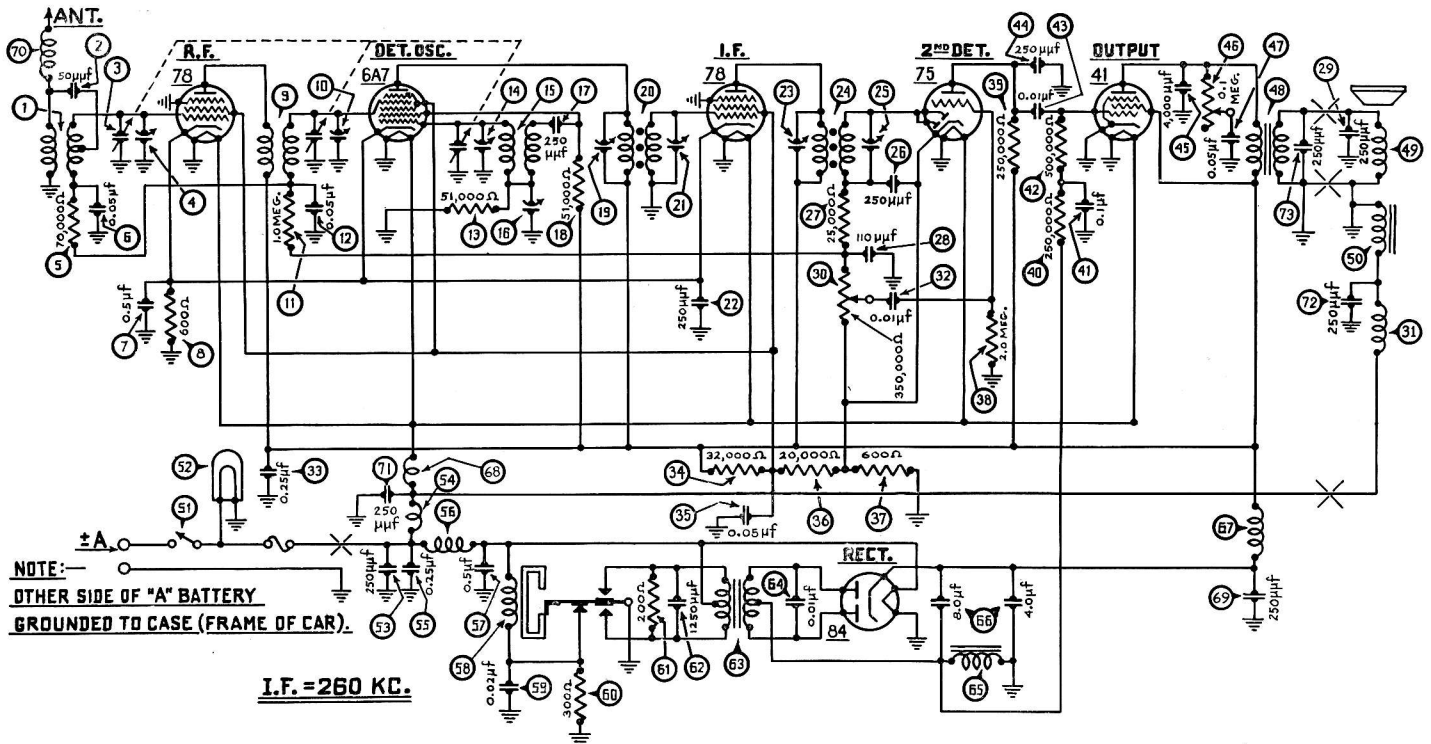
The Receiver is fully covered by the Standard Warranty (see next page). Read it carefully. Should this Receiver or the Receiver installation ever require attention, go immediately to your dealer or to the service station that made the installation, for efficient service.

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 or United Motors Service Station.



### MODEL 809 — PARTS LIST

① Antenna Transformer .....32-1618	②⑤ Padder (Sec. 2nd I. F. Tran.) ....	④⑧ Cone & Voice Coil .....36-3159	⑦⑩ Condenser (250 mmfd.) ...30-1032
② Condenser (50 mmfd.) .....4587	②⑥ Condenser (250 mmfd.) ...30-1032	⑤⑩ Field-coil Assembly .....02795	⑦⑩ Control Assembly .....42-5332
③ Tuning Condenser .....31-1483	②⑦ Resistor (25,000 ohms) ...33-1013	⑤① "On" & "Off" Switch Assm. 42-5336	⑦⑩ Glass and Dial .....27-7835
④ First Padder (on tun. cond.) ....	②⑧ Condenser (110 mmfd.) ...30-1031	⑤② Pilot Lamp .....34-2039	⑦⑩ Pointer Assembly .....42-5335
⑤ Resistor (70,000 ohms) ...33-1115	②⑨ Condenser (250 mmfd.) ...30-1032	⑤③ Condenser (250 mmfd.) ...30-1032	⑦⑩ Bezel Plate .....28-7108
⑥ Condenser (.05 mfd.) ...30-4020	③① Vol. Con. & Coupling Assm. 38-6605	⑤④ "A" Choke .....32-1344	⑦⑩ Knobs .....27-4137
⑦ Condenser (.5 mfd.) .....3-4227	③② Choke .....32-1464	⑤⑤ Condenser (.25 mfd.) ...30-4145	⑦⑩ Stud (Spiner Mtg.) .....6122
⑧ Resistor (600 ohms) ...33-2929	③③ Condenser (.01 mfd.) ...30-4169	⑤⑥ Vibrator Choke .....32-1377	⑦⑩ Control Mounting Bracket .29-2773
⑨ R. F. Transformer .....32-1619	③④ Condenser (.25 mfd.) ...30-4134	⑤⑦ Condenser (.5 mfd.) ...30-4227	⑦⑩ Keys .....28-2782
⑩ Second Padder (on tun. cond.) ....	③⑤ Resistor (32,000 ohms) ...3525	⑤⑧ Vibrator .....38-5036	⑦⑩ Studs (Set Mtg.) .....28-6298
⑪ Resistor (1,000,000 ohms) 33-1096	③⑥ Condenser (.05 mfd.) ...30-4020	⑤⑨ Condenser (.02 mfd.) ...30-4039	⑦⑩ Nuts (Set Mtg.) .....W98A
⑫ Condenser (.05 mfd.) ...30-4020	③⑦ Resistor (20,000 ohms) ...6650	⑥① Resistor (300 ohms) ...33-3010	⑦⑩ Knob (Tone Control) .....27-4052
⑬ Resistor (51,000 ohms) .....6098	③⑧ Resistor (600 ohms) ...33-3207	⑥② Resistor (200 ohms) .....7217	⑦⑩ Spark Plug Resistors ...33-1195
⑭ Third Padder (on tun. cond.) ....	③⑨ Resistor (2,000,000 ohms) 33-1025	⑥③ Condenser (1250 mmfd.) ...5886	⑦⑩ Distributor Resistor ...33-1196
⑮ Oscillator Transformer .....32-1620	④① Resistor (250,000 ohms) ...33-1097	⑥④ Power Transformer .....32-7352	⑦⑩ Interference Condensers ...30-4007
⑯ Fourth Padder (on tun. cond.) ....	④② Resistor (250,000 ohms) ...33-1097	⑥⑤ Condenser (.01 mfd.) ...30-4051	⑦⑩ Fuse .....7217
⑰ Condenser (250 mmfd.) ...30-1032	④③ Condenser (.1 mfd.) ...30-4122	⑥⑥ Filter Choke .....32-7351	⑦⑩ Fuse Insulator .....27-7729
⑱ Resistor (51,000 ohms) ...33-1163	④④ Resistor (500,000 ohms) ...6097	⑥⑦ Filter Condenser .....30-2109	⑦⑩ Antenna Lead .....38-5131
⑲ Padder (Pri. 1st I. F. Tran.) ....	④⑤ Condenser (.01 mfd.) ...30-4145	⑥⑧ R. F. Choke .....32-1348	⑦⑩ Flexible Shaft (21") ...28-8354
⑳ First I. F. Transformer .....32-1621	④⑥ Condenser (250 mmfd.) ...30-1032	⑥⑨ "A" Choke .....32-1438	⑦⑩ Flexible Shaft (28") ...28-8355
㉑ Padder (Sec. 1st I. F. Tran.) ....	④⑦ Condenser (4000 mmfd.) ...30-4185	⑦① Condenser (250 mmfd.) ...30-1032	⑦⑩ Tone Control Shaft (21") .28-8356
㉒ Condenser (250 mmfd.) ...30-1032	④⑧ Tone Control .....33-5101	⑦② Antenna Choke .....32-1637	⑦⑩ Tone Control Shaft (28") .28-8358
㉓ Padder (Pri. 2nd I. F. Tran.) ....	④⑨ Condenser (.05 mfd.) ...30-4012	⑦③ Condenser (250 mmfd.) ...30-1032	⑦⑩ Lock Cylinder Assembly ...42-5337
㉔ Second I. F. Transformer ..32-1622	④⑩ Output Transformer .....2598	⑦④ Condenser (250 mmfd.) ...30-1032	⑦⑩ 28" Shaft Kit .....45-1133

### 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 depots in any way so as, in our judgement, 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.

### Model 809 — 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

# TRANSITONE AUTOMOBILE RADIO CORP.

## PHILADELPHIA, PA.