
INSTRUCTIONS
for
INSTALLING THE

1940

PACKARD CUSTOM
AUTOMOBILE RADIO

WITH PUSH BUTTON
AUTOMATIC TUNING



1940 PACKARD AUTO RADIO INSTALLATION INSTRUCTIONS

IT IS IMPORTANT THAT THESE INSTRUCTIONS BE READ CAREFULLY AND THE INSTALLATION MADE EXACTLY AS DESCRIBED. BY OBSERVING THESE INSTRUCTIONS, A SATISFACTORY INSTALLATION CAN BE MADE QUICKLY AND EASILY.

MOUNTING THE RECEIVER CASE

Two holes are provided in the bulkhead on the **LEFT SIDE** of the car. Punch the holes through the sound insulation on the driver's side of the bulkhead.

The paint must now be thoroughly cleaned from the metal surrounding the two holes. This is done so as to insure good electrical contact.

Place the receiver case in position against the left side of the bulkhead so that the control end of the case faces the center of the car (see Fig. 1).

Bolt the case to the bulkhead using the two "T" bolts, two plain washers, two lockwashers, and two nuts supplied with the receiver. The flat washers and lockwashers must be placed on the motor compartment side of the bulkhead. **IMPORTANT: Before mounting the set securely, make the adjustments described on Page 8 under "MATCHING THE ANTENNA" and "TO OBTAIN MAXIMUM SENSITIVITY."**

MOUNTING THE SPEAKER

Holes for mounting the speaker are provided in the bulkhead on the **RIGHT SIDE** of the car (see Fig. 1 for location of speaker). Clean the metal surface surrounding the holes so as to insure good electrical contact. Also punch the holes through the sound insulation to the other side of the bulkhead.

The back of the speaker is equipped with four threaded holes. Insert the short threaded end of the two threaded studs into the holes in the speaker case which correspond in spacing to the two holes in the car's bulkhead and at the same time will allow the speaker to be mounted so that the cable comes out at the top.

After the studs have been tightened securely into the speaker body, you must mount the entire speaker unit against the bulkhead. Use the two flat washers, two lockwashers and two nuts provided for the purpose.

MOUNTING THE CONTROL HEAD

In order to mount the control head behind the center of the instrument panel proceed as follows:

1. Open the glove compartment and remove the six screws around the edge of the opening. This will allow the glove compartment to drop away and it should be allowed to rest on the floor of the car temporarily.
2. Remove the long narrow face plate now located in the center of the instrument panel.
3. Remove the ash container located in the center of the instrument panel. This is done by pulling up until the container is free of the instrument panel.

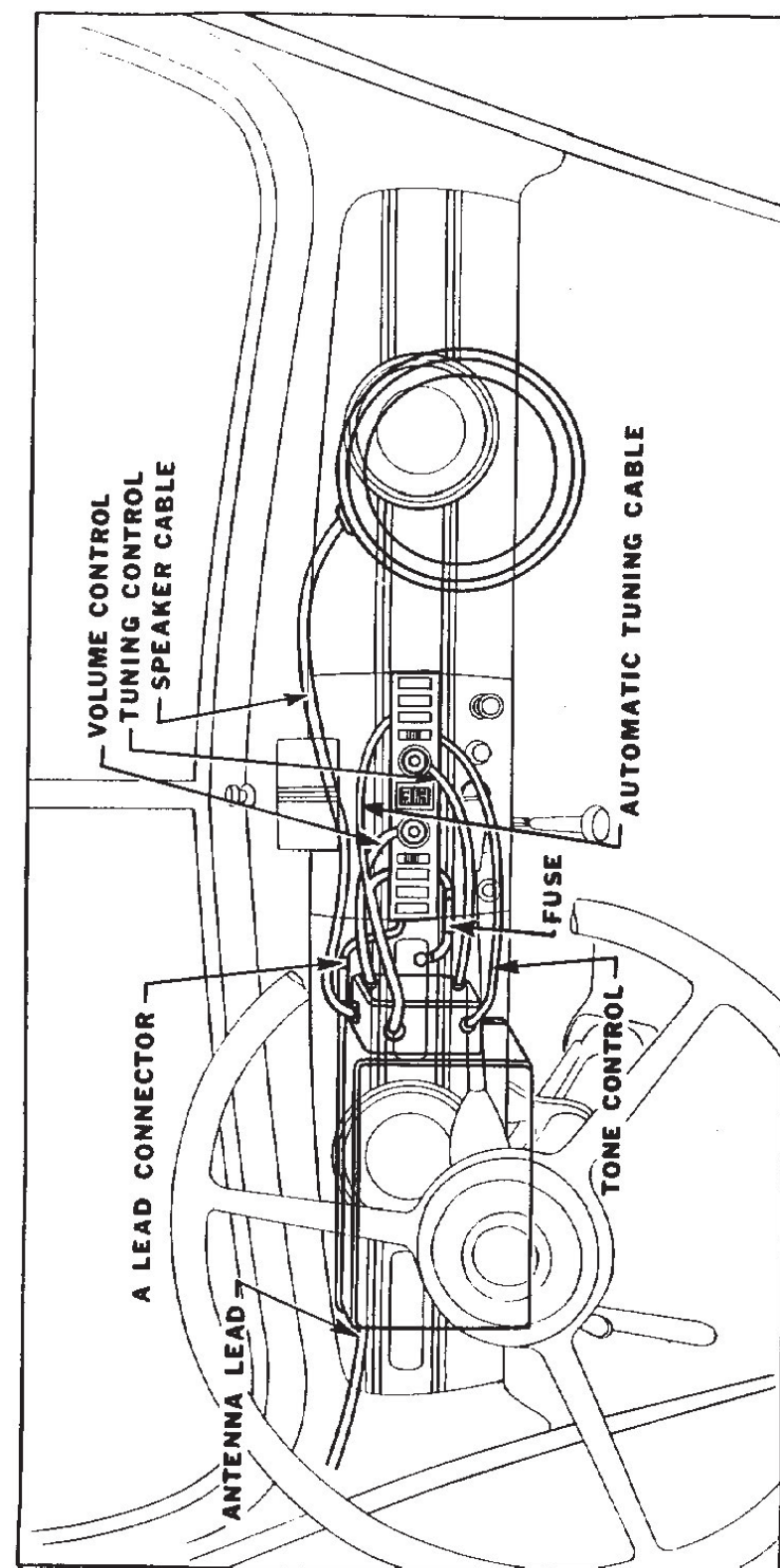


FIG. 1
INSTALLATION OF CONTROL HEAD, SPEAKER AND CHASSIS

4. **DISCONNECT THE BATTERY CABLE AT THE STARTER SWITCH ON THE STARTER MOTOR.** This is done so as to protect against possible short circuiting of the wiring behind the control head on the instrument panel.

5. Carefully push aside the wiring behind the glove compartment side of the instrument panel.

6. (a) Remove the two lower screws holding the center section of panel in place (one at each side).

(b) Using the longer screws provided in the installation kit, attach the two small "L" shaped reinforcing brackets, placing them so that the short bent-over end is toward the panel.

(c) Allow these brackets to hang loosely until the control head has been put into place. See Paragraph 11, Page 6.

7. Before attempting to place the control head behind the instrument panel you must put the station call-letter tabs into the proper push buttons.

(a) Select call letters of the five stations which you wish to set up on the Automatic station Selector Buttons. The station for each button must be in the frequency range shown in Fig. 5.

(b) Insert the call letter tab of the station **WHOSE FREQUENCY (KILOCYCLES) IS LOWEST**, in the group of stations which you have selected, in the extreme left push button (No. 1 in Fig. 5).

An example of the above procedure for a group of five local stations such as would be found in Chicago, Illinois, is as follows:

1. Call letters of desired stations are WGN; WJJD; WAAF; WMAQ; and WBBM.

2. Arrange call letters in the order of the station frequency (kilocycles), the lowest station frequency appearing first. Be sure that the frequency of each station falls within the range of its button as specified in Fig. 5 on Page 10.

STATION	BUTTON	FREQUENCY
WMAQ	1	670 KC
WGN	2	720 KC
WBBM	3	770 KC
WAAF	4	920 KC
WJJD	5	1120 KC

3. Insert the tab for station WMAQ in the extreme left button (Button No. 1 Fig. 5). This is done by pulling off the chromium cap covering the top of the push button. Insert the celluloid tab and the call letter tab in this cap and replace it on the button. Similarly insert the tab for station WGN in the second button from the left (Button No. 2).

4. You must observe the rule of labelling each successive push button (proceeding from left to right with the tab of the station whose frequency is *next higher*, otherwise it may be impossible to set-up the automatic station selector.

(c) Proceed to place the remainder of the station call letter tabs in the push buttons **BEING CAREFUL THAT EACH TAB YOU INSERT IS FOR A STATION NEXT HIGHER IN FREQUENCY (KILOCYCLES)** in the group of stations that you are setting up. Thus the tab inserted in the push button second from the right (Button No. 5) will be for the highest frequency station in the entire group.

8. **WHEN THIS RADIO RECEIVER IS INSTALLED IN MODELS 1803, 1804, 1805, 1807 AND 1808 ONLY:** Remove the two thick spacer washers now located on the tuning and volume control knob shafts. This can be done by merely pulling them off the shaft bushings.

FOR CAR MODELS 1800 AND 1801 do not remove these spacer washers now on the tuning and volume control knob shafts.

9. Insert the control head through the glove compartment opening in the instrument panel making sure to **INSERT THE FLEXIBLE LEADS AND CABLES FIRST**. Also see that the cables will be located near the center of the back of the instrument panel.

Ease the control head into position behind the center of the instrument panel, being careful not to damage nearby cables and leads. In the Models 1803, 1804 and 1805, it is sometimes necessary to file both ends of the control head front plate to permit it to slip into place.

When the control head has been put in place, but before the face plate is mounted, one of the square felt gasket washers should be slipped over each of the chromium push buttons. These washers prevent the leakage of light around the buttons.

10. After the control head is in the correct position, place the new face plate (escutcheon) on the instrument panel.

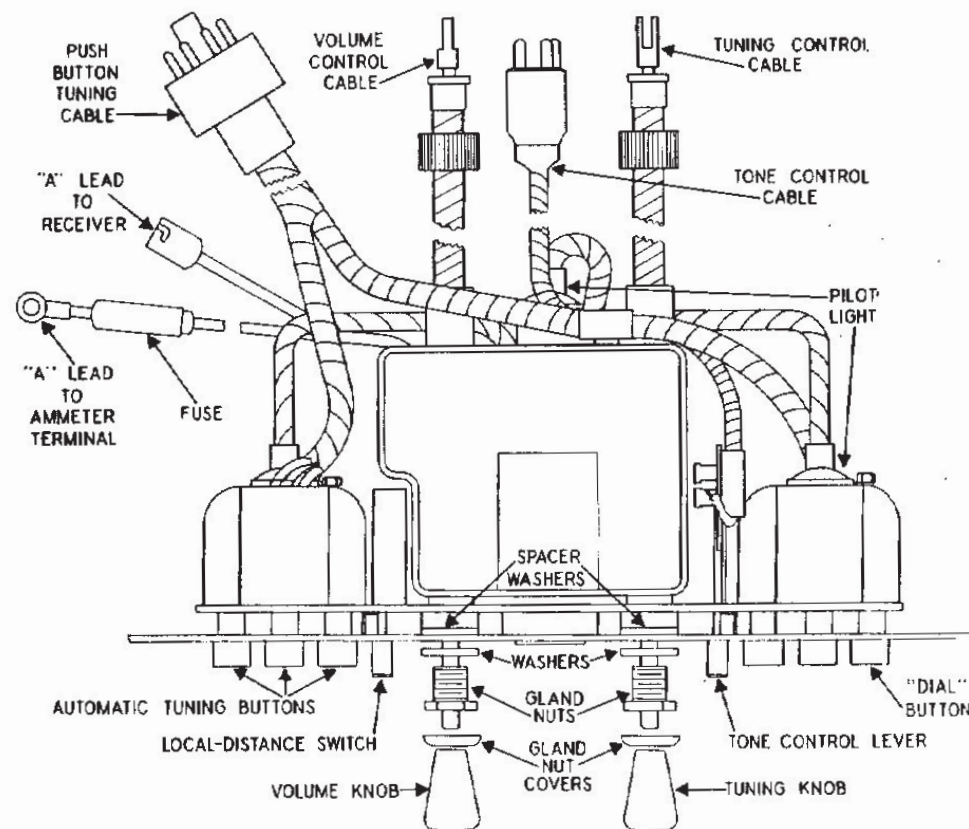


FIG. 2

FOR CAR MODELS 1800, 1801, 1807 AND 1808 ONLY

Bolt the control head and face plate to instrument panel using the two thin washers included with this radio, between the gland nuts and the control shaft bushings (see Fig. 2). The gland nuts screw into the control shaft bushings and hold the control head and face plate in position.

FOR CAR MODELS 1803, 1804 AND 1805 ONLY

The tenite face plate used in these models must be slipped into position from the side. In order to do this, push the control head back until the shafts do not project out of the holes in the panel, then slide the face plate into position from the glove compartment side. Bolt the control head and face plate to the instrument panel using the two thin washers, included with this radio, between the gland nuts and the control shaft bushing (see Fig. 2). The gland nuts screw into the control shaft bushings and hold the control head and face plate in position.

11. When the control has been mounted and the gland nuts tightened, the two "L" shaped reinforcing brackets (see Paragraph 6, Page 4) should be swung around so that their bent-over legs bear against the edge of the push button housings, and the screws holding them tightened securely.
12. Place the gland nut covers over the gland nuts (see Fig. 2) and then slide the two control knobs on the control shafts.
13. Replace the ash container in the top of the instrument panel.
14. Replace the glove compartment.

CONNECTING THE SPEAKER AND CONTROL HEAD CABLES TO THE RECEIVER

Refer to Figures 1, 2, and 3 which illustrate the shaft connections to the receiver.

1. Insert the volume control cable in its proper coupling on the receiver case (see Fig. 3). As you do this, turn the volume (**LEFT**) knob to be sure the shaft engages, then tighten the shaft coupling collar at the receiver case.
2. Insert the flexible tuning control cable (see Fig. 2) into its coupling in the side of the receiver case (see Fig. 3). Turn the tuning (**RIGHT**) knob until the shaft end engages and then tighten the shaft coupling collar at the receiver case.
3. Insert the 8-prong push button plug into the socket on the front of the tuning motor housing.
4. Using the tongue shaped clip supplied with the accessories, bind the tuning control flexible cable and the push button cable together at one place half way along the length of the cable.
5. Connect the speaker cable plug to the socket on the top of the tuning motor housing (see Fig. 3).
6. Put the fuse in the insulating sleeve then insert the fuse and sleeve in the fuse housing of the "A" lead connected to the control head. Then connect it with the short bayonet tipped "A" lead projecting from the control head. The eyelet on the end of the "A" lead must be connected to the discharge side of the ammeter. The remaining "A" lead (female end) project-

ing from the control head must be connected to the bayonet tipped "A" lead coming out of the top of the receiver case.

7. Push the tone control plug into its proper socket on the side of the receiver case (see Fig. 3).
8. Re-connect the battery cable at the starter switch on the starter motor.

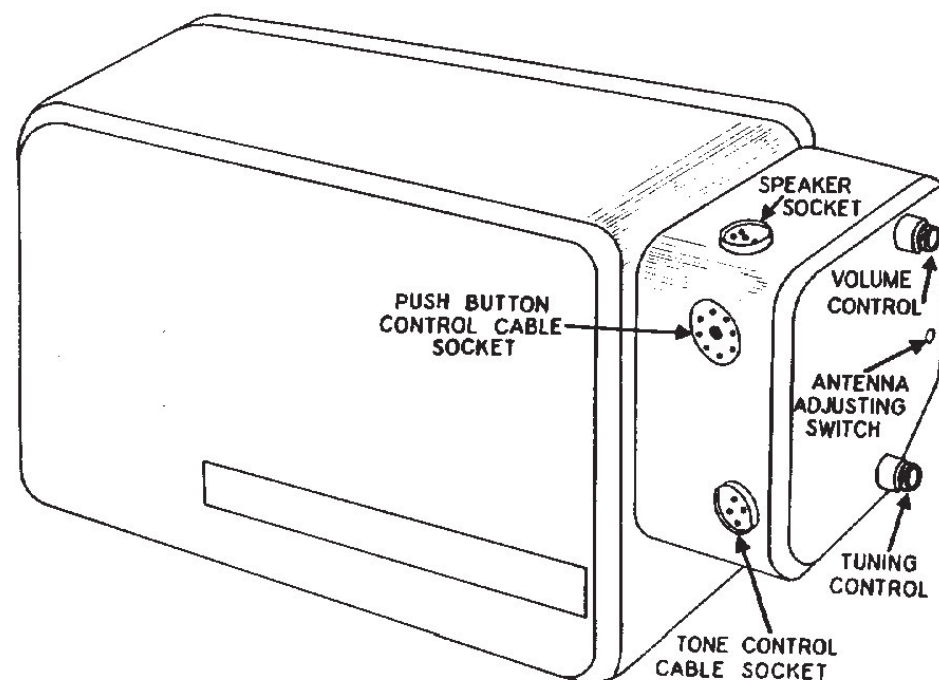


FIG. 3

ANTENNA

The Packard Cowl Antenna (part No. PA-351487) or the Packard Under-carriage Antenna (part No. PA-327559), can be used with this receiver. The Cowl type antenna is recommended because of its superior performance. It is not subject to mechanical abuse, or decrease in efficiency caused by weather conditions and materially reduces tire static.

To install either antenna, follow the instructions enclosed in the antenna package.

After the antenna has been mounted on the car, you must connect the antenna lead-in to the antenna receptacle on the left side of the receiver case.

SYNCHRONIZING CONTROLS AND MATCHING THE ANTENNA

VOLUME CONTROL: Turn the volume control (left) knob clockwise as far as it will go until it strikes a definite stop. Then turn it counter-clockwise until the switch clicks off. This synchronizes the "off" position of the switch with the "off" position of the volume control.

TUNING CONTROL: As the tuning dial is calibrated in kilocycles, it will be necessary to line it up with the receiver so that stations may be tuned in at their proper place on the dial. To do this turn the receiver on and proceed as follows:

1. Hold down **"DIAL"** button until selector mechanism stops running.
2. Tune in a station whose frequency in kilocycles is known. (The number on the dial represents channel numbers which with the addition of a zero, become the number of kilocycles). Hold the tuning control knob and with the eraser on the end of a lead pencil, move the dial until the correct frequency is indicated.

NOTE: The following adjustments must be made before receiver is mounted securely in position:

MATCHING THE ANTENNA: After the receiver is operating you must check to see that the Antenna Adjusting Switch is in the correct position for the particular type antenna in use. This switch is located behind the small chrome button on the right side of the receiver case. A red instruction tag is held in place by this button. The instructions which appear on this tag are repeated below:

FOR COWL TYPE ANTENNA: Turn the switch located under this button so that the screwdriver slot points to **WHITE DOT** on receiver case.

FOR UNDERCARRIAGE ANTENNA: Turn the switch located under this button so that the screwdriver slot points to **RED DOT** on receiver case.

TO OBTAIN MAXIMUM SENSITIVITY make the following adjustment:

1. Set the receiver to **"DIAL"** tuning.
2. With volume control on **"Full,"** tune in a **WEAK** station between 1350 and 1580 KC.
3. Remove the large chrome plug button on the right side of the receiver case.
4. Adjust the screw behind this button until maximum volume is obtained.
5. **DO NOT DISTURB THE SCREW UNDER THE BROWN BUTTON CAP.**

IGNITION INTERFERENCE ELIMINATION

1. Install the generator interference elimination condenser (part No. 117301) on the Generator, fastening it under the ground screw on the generator (see Fig. 4). Be sure to clean off any paint or dirt where you mount the condenser. Do not use the **"FIELD"** terminal. Connect the condenser lead to the **"A"** terminal on the generator. If generator interference persists, it can be eliminated by cleaning the commutator and re-seating the brushes.
2. Connect the Ignition Switch interference elimination condenser (part No. 117302) to the feed lead on either the ignition switch or the ammeter. Try both locations and install the condenser where it is most effective. The condenser should be mounted on the flange of the instrument board. Be sure to scrape off all dirt and paint where you mount the condenser.

3. Cut the distributor-to-coil high tension lead about one inch from the distributor cap and install the screw-in-type suppressor resistor (see Fig. 4).
4. To check for ignition interference, turn on the radio, start the motor and disconnect the antenna lead-in from the receiver. If there is any interference coming through when the volume control is three-quarters open and the receiver tuned between stations, carefully relocate the speaker cable and ammeter lead so that the interference is reduced to a minimum and fasten

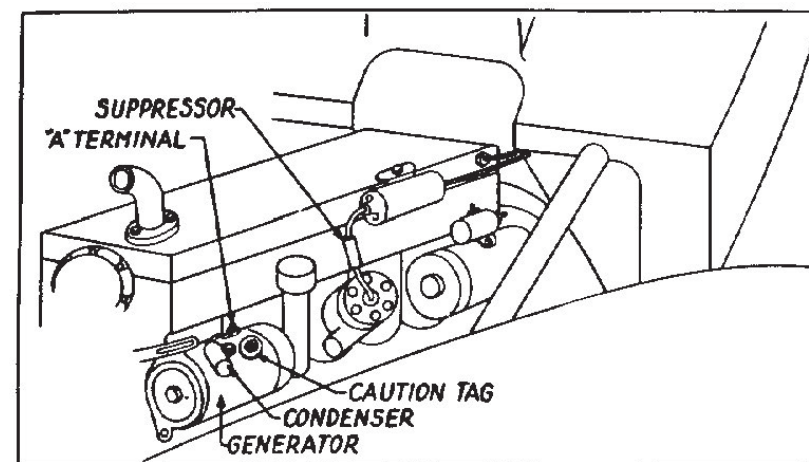


FIG. 4

at that point. Reconnect the antenna lead and if some interference is still present, move the antenna lead to the most quiet location. Make sure all antenna shield connections are properly grounded. Interference from electric clocks can be eliminated by connecting an additional interference elimination condenser to the ammeter terminal.

SETTING UP RECEIVER FOR AUTOMATIC TUNING

1. First turn the receiver on and allow it to operate for twenty minutes before making these adjustments.
2. Press in the **"DIAL"** Button and hold it in until the tuning motor stops, indicating that your receiver is now connected for manual tuning.
3. Using the tuning knob, tune in the station whose call letters appear on the extreme left hand button (Button No. 1, Fig. 5). This is done so you can identify the station by its program.
4. Remove the front cover on the receiver case. Two slots are provided at each side of the case so that the cover can be pried off easily. **CAUTION:** If cover is pried off with a screwdriver, do not push screwdriver too far into case. After the cover has been removed, you will note two rows of adjusting screws in the receiver (see Fig. 5).
5. Press in the button bearing the call letters of the station you have just tuned in manually (Button No. 1 on extreme left). Hold this button in until the

tuning motor stops running. Then using a screwdriver, adjust the screw marked 1A (in the receiver case) until the station you were just listening to is heard again.

6. Adjust the screw marked 1B for maximum volume. Repeat adjustment of 1A, making sure you set it to the point where the tone is the deepest, also where hiss and noise are at a minimum. **These adjustments must be made very carefully to assure good reception.**

7. The set-up for this station is complete and you can proceed to set up the next station which you have labelled on the push buttons. Proceed as follows:

8. (a) Press in "DIAL" button, and hold it in until tuning motor stops.

- (b) Using the tuning knob, tune in the station whose call letters appear on the second button from the left (Button No. 2, Fig. 5) and note the program being received.

- (c) Press in Button No. 2.

- (d) Adjust screw No. 2A until desired station is again tuned in.

- (e) Adjust screw No. 2B for maximum volume. Repeat adjustment of 2A, adjusting it for deepest tone.

- (f) This completes the set-up of the second button.

- (g) The other buttons can be set up in a similar manner. **THE ADJUSTING SCREWS LOCATED IN THE RECEIVER ARE ASSOCIATED WITH THE PUSH BUTTONS AS FOLLOWS:**

PUSH BUTTONS	ASSOCIATED TRIMMER SCREWS
1	1A and 1B
2	2A and 2B
3	3A and 3B
4	4A and 4B
5	5A and 5B

9. After all the stations have been set up, it is a good policy to recheck the settings of all the trimmers, to make certain that they are adjusted as accurately as possible for deepest tone and minimum noise. Then replace the cover on the receiver case.

10. The receiver is now completely installed and ready to operate either manually or automatically.

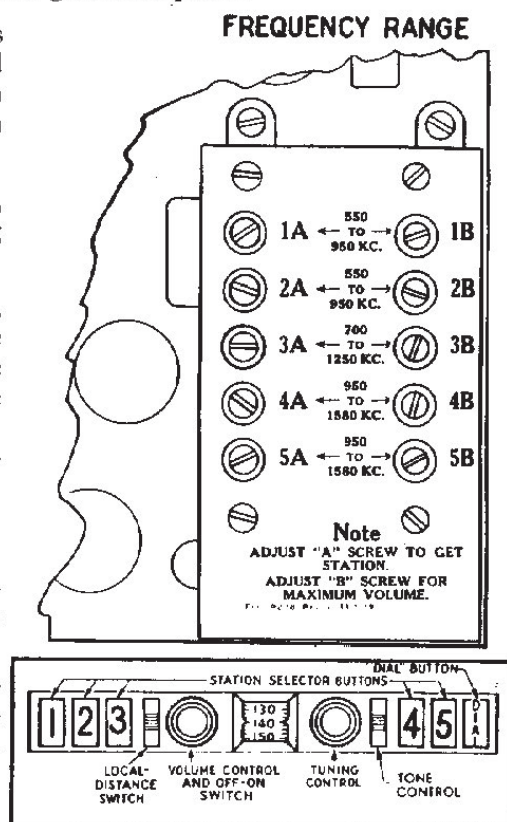


FIG. 5

WARRANTY AND SERVICE

Each Packard Radio is covered by the Warranty against defects in material and workmanship for a period of 90 days after delivery of the radio.

Warranty Repair Service is provided at all Stewart-Warner Warranty Labor Radio Service Stations.

TO OBTAIN WARRANTY SERVICE:

1. Make preliminary checks and such minor repairs as replacing burnt-out fuses, defective tubes, vibrators, repairing loose connections, checking automatic tuning adjustments, etc. These operations are explained in the Warranty Policy Bulletin packed with each set.
2. If you have made these preliminary checks and tests and are unable to repair the radio so that it performs satisfactorily remove the radio and speaker from the car and return it to the nearest authorized Stewart-Warner Warranty Labor Service Station where free warranty repairs will be made as covered by the Warranty Policy. When the repairs are completed, re-install the radio in the car.

In case the owner is traveling, the Packard dealer to whom he applies for service will render a handling charge not to exceed \$1.00 for the removal and re-installation of the radio.

IMPORTANT: A WARRANTY REGISTRATION TAG AS SHOWN BELOW IS FURNISHED WITH EACH RADIO. THIS TAG MUST BE FILLED IN BY THE DEALER AND ATTACHED TO THE RADIO WHEN IT IS INSTALLED, IN ORDER THAT THE WARRANTY LABOR SERVICE STATIONS MAY HAVE THE PROPER INFORMATION TO GIVE SERVICE UNDER THE WARRANTY. THIS IS THEIR AUTHORIZATION TO RENDER WARRANTY SERVICE "FREE OF CHARGE."

DEALER—Fill out this Tag properly IN INK and attach to the radio in the car. This Tag properly filled out must be attached to the radio in order to obtain Free Warranty Service, if required during the initial 90-day Warranty period.

MODEL NO. _____ SERIAL NO. _____

OWNERS WARRANTY REGISTRATION
STEWART-WARNER—PACKARD
AUTO RADIO

Owner _____ Car License No. _____
Print Name

Address _____
Street City State

Purchased _____ From _____
Date Dealer's Name

Address _____
Dealer
(READ IMPORTANT INSTRUCTIONS ON OTHER SIDE)

PACKARD MOTOR CAR COMPANY

General Accessory Division

DETROIT, MICHIGAN

WIRING DIAGRAM—1940 PACKARD AUTOMOBILE RADIO MODEL PA-333915

