

Studebaker DeLuxe Auto Radio

INSTALLATION INSTRUCTIONS

Custom Built by Philco

Sold Exclusively by Studebaker Dealers

THESE INSTRUCTIONS have been carefully prepared for your use in installing the Studebaker DeLuxe Radio (Stock No. AC-266) in the 1935 model Studebaker cars. Read thoroughly, then follow the instructions carefully in every detail.

Antenna

All closed cars manufactured after July 1, 1931, are equipped with the roof-type antenna. The lead-in is brought down the left windshield post and is coiled up behind the left cowl trim panel. An antenna designed especially for convertible models can be secured from the Studebaker factory through the Accessory Division.

Receiver Location and Installation

Refer to Fig. 1 showing the location of the holes in the dash. Locate one of the holes and mark with a sharp punch; then use the template furnished with the Receiver to locate the remaining two holes. These holes should be drilled with a $\frac{7}{16}$ " drill.

Install the Receiver with the control connections to the left side of the car. (See Fig. 3).

Control Unit

The control unit is mounted on a panel which replaces the dummy door on the left side of the instrument board. This door is held in place by means of three bolts (one at each end and one at the bottom). Care should be taken to fasten the control panel securely so it does not rattle.

The control is furnished with a blank lock cylinder which must be crushed to match the car keys. This operation must be completed before the control is installed on the instrument board.

Instructions for Fitting Car Key to Control Lock

1. Remove the knobs and take off the control unit from the panel.
2. Remove the pilot lamp socket assembly in the rear of the control.
3. Reach in through the opening in the back of the control unit with a medium size screw driver and press down on the brass retaining lock spring, at the same time working the lock cylinder forward. (See Fig. 2).
4. Insert the car key in the lock cylinder and crush in the same manner that you crush the standard lock, with pliers or vise.
5. Assemble the dial and spring on the cylinder. Push down the retaining spring and replace the lock in the same relative position that it had when removed. With the key in the lock push the lock back, working the lock pin in place in the slot in the lock bar in back of the lock. Push the lock in until the retaining spring snaps in place.
6. Reassemble the control on the panel.

Control Shaft Installation

The control must be unlocked so that the volume control shaft is free. Then connect the volume control flexible shaft

(left hand) to the rear coupling on the end of the Receiver. Be sure the coupling is properly seated and then tighten the knurled casing retaining nut. Next connect the tuning control shaft in a like manner to the front coupling.

The black lead coming from the back of control must be coupled to the short connector that branches from the speaker cable at the plug.

"A" Or Battery Cable (See FIGURE 4)

Connect the "A" or battery cable to the Receiver lead. The fuse housing connector couples by inserting the small end and making a slight turn clockwise. The other end of the cable must be connected to the right side of the ammeter. The shield pigtail at each end of the cable must be grounded

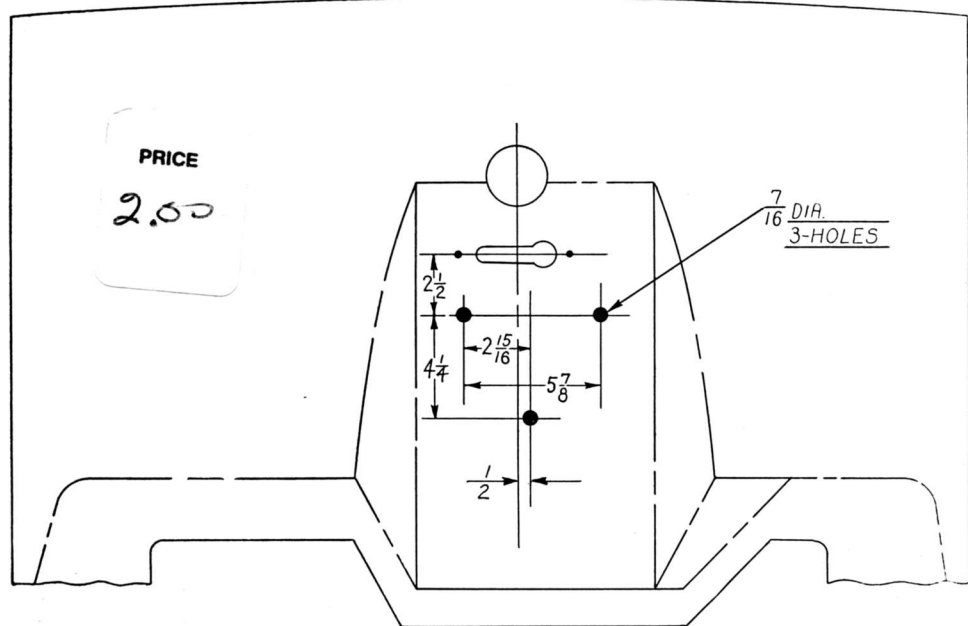


FIGURE 1

under a convenient screw and the cable dressed up behind the Receiver. Be sure the fuse and fuse insulator are in place in the fuse housing before the cable is connected.

Antenna Lead

The antenna lead must be connected in the receptacle on the left end of the Receiver near the top and run along the instrument board to the left-hand windshield post. The lead must be spliced to the car antenna lead-in. Solder and tape the splice. The shield pigtail must be grounded. Cut off the excess lead-in before making the splice.

Speaker Cable and Speaker Installation (Fig. 3 and 4)

Determine the location of the metal frame for mounting the speaker in the center above the windshield. (See Fig. 4). This can be felt thru the headlining. Then slit the headlining vertically and horizontally inside the frame. Carefully cut away the headlining to within one inch of the frame. This will make a circular hole two inches smaller in diameter than the frame.

Connect the speaker cable plug in the socket on the lid of the Receiver and then fish the cable up the right windshield post. To do this, first feed a piece of iron or fish wire across the header and down the right windshield post. A piece of

cotton sleeving is furnished with each set. This must be slipped over the end of the cable and then drawn tight with the fingers. Fasten to the wire and then carefully pull the wire and cable up the post, across the header and out the speaker opening.

The ends of the speaker cable are equipped with small tip connectors which plug into the sockets on the side of the speaker. The sockets are marked with green, yellow and black paint to correspond with the colors of the speaker cable leads. The leads must be connected to the sockets of corresponding colors.

The speaker must be fastened in the opening provided with four self tapping screws (see fig. 3 and 4). The connections on the speaker must be down so that they cannot be pulled out by any strain on the cable.

The grille and bezel must next be fastened in place. The location of the four screw holes is shown in Fig. 3. The cardboard spacer must be placed between the grille and the headlining.

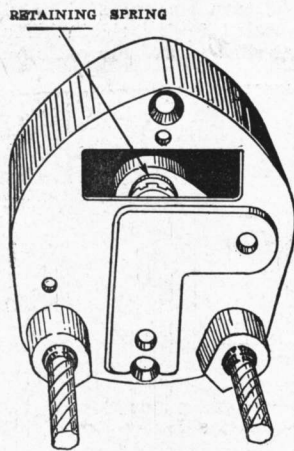


FIGURE 2

Control Adjustments

Turn the left-hand (volume control) knob counter-clockwise to the "off" position. Pull off the knob and loosen the set screw on the shaft. Then turn the shaft until it can be locked in place with the control lock. Tighten the set screw securely and replace the knob.

This adjustment must be made so that the radio can be turned "off" and the control locked.

The right hand knob is the tuning control knob. With the Receiver turned on, tune in a station whose frequency in kilocycles is known. The numbers on the dial represent the frequency in kilocycles with the last "0" omitted. With the known station accurately tuned in, pull off the knob and loosen the set screw. Then turn the shaft until the proper frequency is indicated on the dial. Tighten the set screw securely and replace the knob.

Ignition and Generator Interference Suppression

On all cars a standard suppression method is followed. Place the spark plug resistors on each spark plug in a vertical position and the screw type suppressor in the high tension lead between the coil and distributor as near the distributor as possible.

One of the small condensers is fastened under the screw that holds the generator cutout and the lead connected to the battery terminal of the cutout. The other condenser is connected to the dome light wire where it enters the windshield post on the right side of the instrument board and is grounded under the lower instrument board fastening screw. In some cases it may be necessary to bond all the metal controls that come through the large grommet in the center of the dash.

In extreme cases on the eight cylinder cars, it may be necessary to place an additional condenser on the ammeter. In this case it is grounded and held in place by the lower mounting screw of the ammeter. If, after this is completed, there is still a noticeable amount of ignition interference, the distributor rotor arm should be peened.

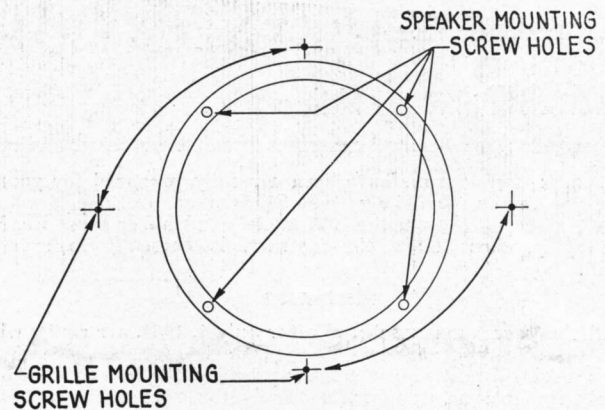


FIGURE 3

Peening of the Rotor Arm

Place the end of the rotor on a steel block and peen with a small machinist hammer, extending about .005. The greatest care should be taken to make sure that the rotor arm itself does not strike the stationary contacts in the cap.

Operating Instructions

The left-hand knob on the control is a combination switch and volume control. First turn the key one-quarter turn clockwise to unlock the control. Then 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 halfway, allow the tubes to heat up. Then turn the other 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 frequencies 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 knob is on the bottom of the Receiver panel at the left end, back near the dash. It should be adjusted to the tone most pleasing. There are three positions, bright, mellow and deep. Speech is clearest when in bright, while usually orchestras will sound best on bright or mellow.

Another use of the tone control is as a static modifier. When driving through an extremely noisy location, the tone control should be set on 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.

When turning off the Receiver, be sure the volume control knob is turned counter-clockwise until a click is heard and the dial light goes out, otherwise the Receiver will continue to operate and discharge the battery.

WARRANTY ON STUDEBAKER PHILCO RADIO

The warranty on the Studebaker Philco Radio is the standard RMA (Radio Manufacturers' Association) which is as follows:

"The manufacturer warrants each new Radio Receiver and Speaker manufactured by them to be free from defects in material and workmanship under normal use and service, their obligation under this warranty being limited to making good at their 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

STUDEBAKER DE LUXE AUTO RADIO INSTALLATION INSTRUCTIONS

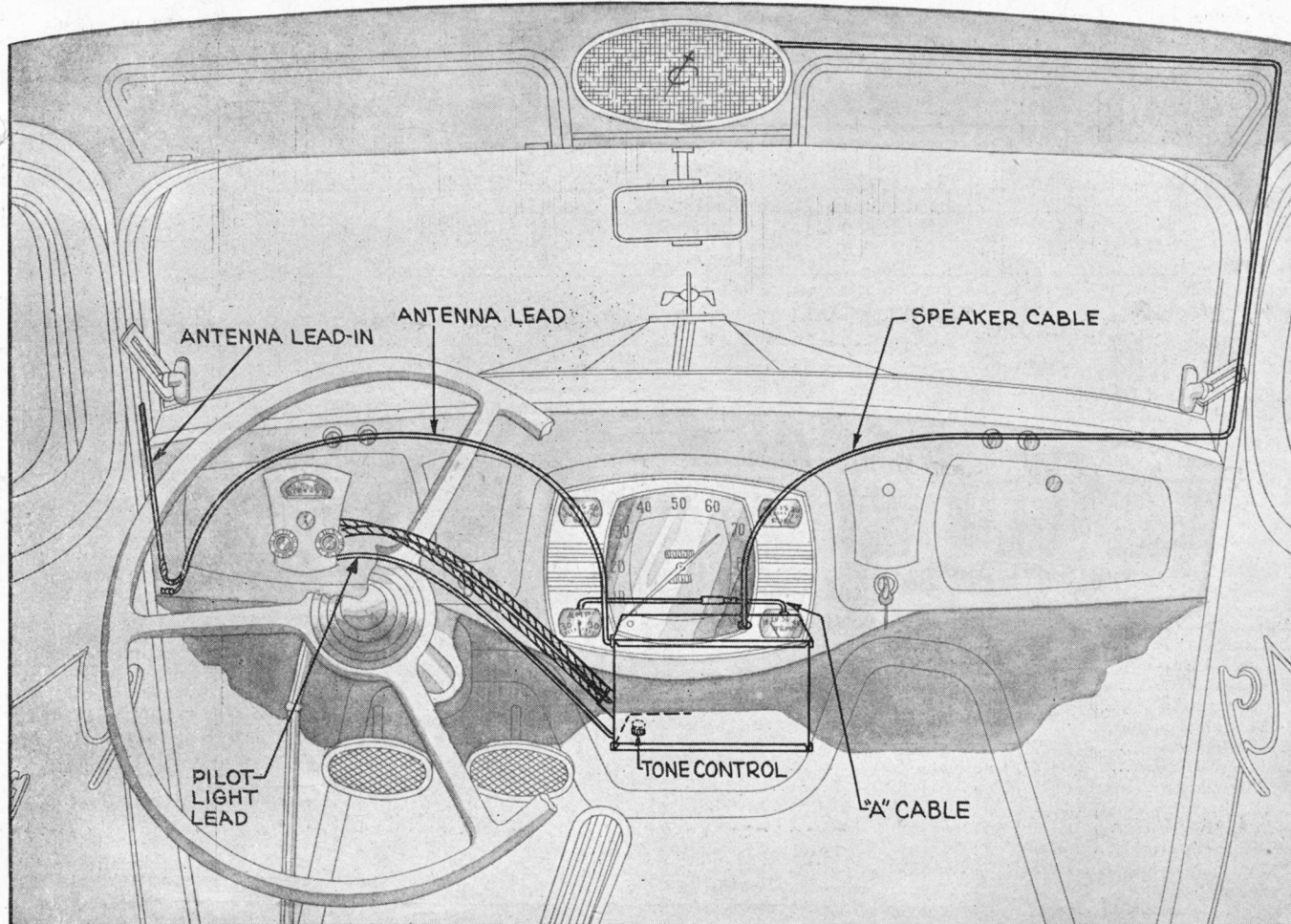


FIGURE 4

to them with transportation charges prepaid, and which their examination shall disclose to their 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 their part, and they neither assume nor authorize any representative or other person to assume for them any other liability in connection with the sale of their Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of their factory or factory depots in any way so as, in their judgment, to effect 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 them."

You will note that under this warranty, the manufacturers' obligations consist of replacing defective parts only at Philadelphia, Chicago, San Francisco and South Bend. However, the manufacturer has gone beyond this standard warranty and has authorized all Philco-Auto Radio distributors, service stations and all United Motors authorized auto radio service stations to replace defective parts, under the warranty, for car dealers F.O.B. their place of business without charge for material.

Labor charges incurred in the repair or replacement of parts during the ninety (90) day warranty period, must be paid for by the Studebaker dealer participating in the sale of the radio set.

In this connection it is recommended that Studebaker dealers who are not adequately equipped to handle their own radio service work have the installations made by a Philco-Auto Radio distributor or service station or by a United Motors authorized auto radio service station. These stations will quote

standard installation prices which include warranty labor during the initial ninety (90) day period.

If satisfactory local service cannot be secured on the replacement of defective receivers or parts, during the warranty, such defective Receivers or parts will be replaced or repaired, without charge for labor or material, if these Receivers or parts are returned, transportation charges prepaid, to any of the following points:

STUDEBAKER SALES CORPORATION OF AMERICA
South Bend, Indiana.

PHILCO-TRANSITONE
A and Allegheny Avenue, Philadelphia, Pennsylvania.

PHILCO-TRANSITONE
3335 W. 47th Street, Chicago, Illinois.

PHILCO-TRANSITONE
218 Fremont Street, San Francisco, California.

When returning alleged defective Receivers or parts to any of the above points, same must be accompanied by copy of letter which has been forwarded to the point of destination wherein specific information regarding serial number of the set, nature of the difficulty and the date of sale or installation, is given.

Studebaker dealers in general will appreciate this is a rather broad and liberal interpretation of the standard RMA warranty. However, unscrupulous or wholesale replacement of parts under this plan will not be countenanced. If it should be found that a procedure of this kind is being followed, the manufacturer has no alternative except to resort to a more literal interpretation of the standard RMA warranty.

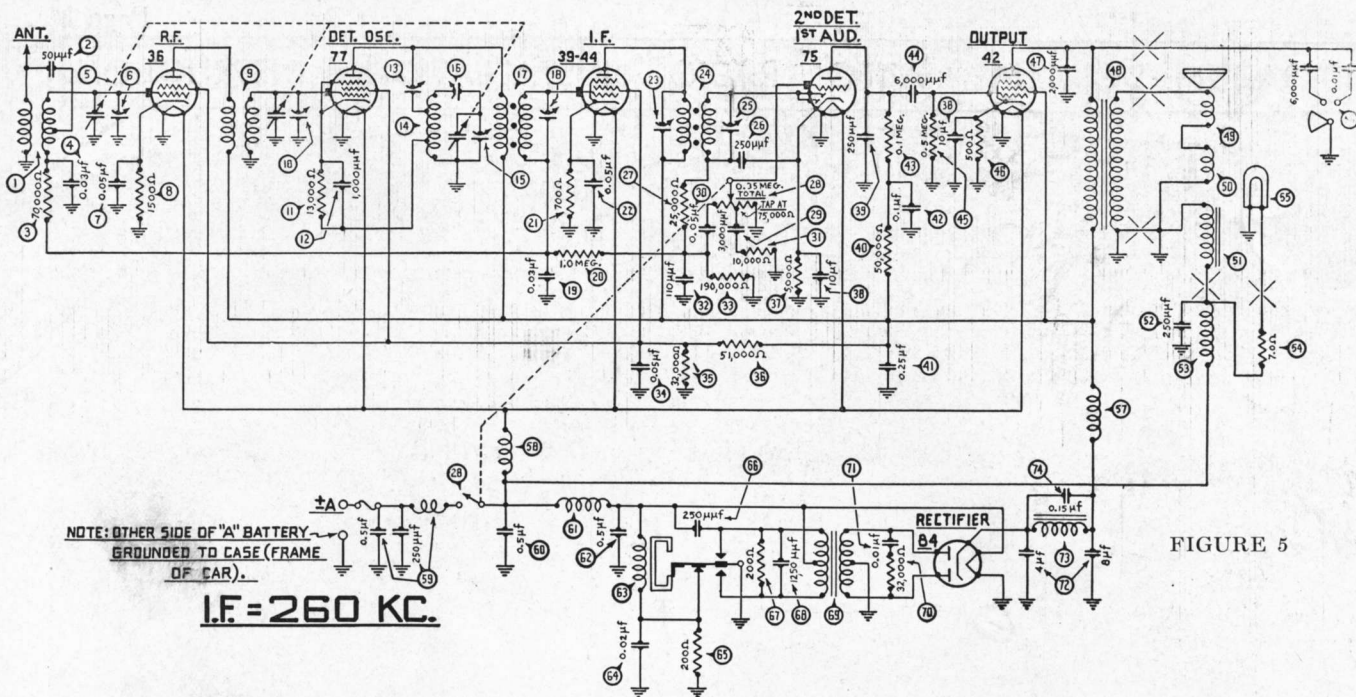


FIGURE 5

PARTS LIST ST3 - STUDEBAKER DE LUXE MODEL AC-266

- | | |
|---|---------------------------------------|
| ① Antenna Transformer..... 32-1535 | ④① Condenser (.25 mfd.)..... 04360 |
| ② Condenser (50 mmfd.).... 30-1029 | ④② Condenser (.1 mfd.)..... 30-4170 |
| ③ Resistor (70,000 ohms).... 33-1115 | ④③ Resistor (.1 meg.)..... 6099 |
| ④ Condenser (.03 mfd.)..... 30-4025 | ④④ Condenser (6000 mmfd.)... 30-4125 |
| *⑤ Tuning Condenser..... 31-1419 | ④⑤ Resistor (.5 meg.)..... 6097 |
| ⑥ 1st Padder (on tun. cond.)..... | ④⑥ Resistor (500 ohms)..... 33-3031 |
| ⑦ Condenser (.05 mfd.)..... 30-4020 | ④⑦ Condenser (2000 mmfd.)... 30-4177 |
| ⑧ Resistor (1500 ohms).... 33-3047 | ④⑧ Output Transformer..... 32-7318 |
| ⑨ R. F. Transformer..... 32-1536 | *④⑨ Cone & Voice Coil..... 45-2062 |
| ⑩ 2nd Padder (on tun. cond.)..... | ④⑩ Bucking Coil..... 45-2066 |
| ⑪ Resistor (11,000 ohms).... 33-1194 | *④⑪ Field Coil..... 45-2065 |
| ⑫ Condenser (1000 mmfd.)... 5215 | ④⑫ Condenser (250 mmfd.)... 30-1032 |
| ⑬ Padder (Pri. 1st I. F. Tran.)..... | ④⑬ Choke..... 32-1374 |
| ⑭ Oscillator Transformer... 32-1537 | ④⑭ Resistor (7 ohms)..... 33-3035 |
| ⑮ 3rd Padder (on tun. cond.)..... | ④⑮ Pilot Lamp..... 34-2040 |
| ⑯ 4th Padder (on tun. cond.)..... | ④⑯ Tone Control..... 30-4243 |
| ⑰ 1st I. F. Transformer..... 32-1538 | ④⑰ Choke..... 32-1539 |
| ⑱ Padder (Sec. 1st I. F. Tran.)..... | ④⑱ "A" Choke..... 32-1282 |
| ⑲ Condenser (.03 mfd.)..... 30-4025 | ④⑲ Interference Filter..... 32-1544 |
| ⑳ Resistor (1 meg.)..... 33-1171 | ④⑳ Condenser (.5 mfd.)..... 30-4210 |
| ㉑ Resistor (700 ohms)..... 6443 | ④㉑ Vibrator Choke..... 32-1281 |
| ㉒ Condenser (.05 mfd.)..... 30-4020 | ④㉒ Condenser (.5 mfd.)..... 30-4047 |
| ㉓ Padder (Pri. 2nd I. F. Tran.)..... | ④㉓ Vibrator..... 38-5036 |
| ㉔ 2nd I. F. Transformer..... 32-1449 | ④㉔ Condenser (.02 mfd.)..... 30-4039 |
| ㉕ Padder (Sec. 2nd I. F. Tran.)..... | ④㉕ Resistor (200 ohms)..... 7217 |
| ㉖ Condenser (250 mmfd.)... 30-1032 | ④㉖ Condenser (250 mmfd.)... 30-1032 |
| ㉗ Resistor (25,000 ohms).... 33-1161 | ④㉗ Resistor (200 ohms)..... 7217 |
| ㉘ Vol. Con. & Switch Assm... 38-6297 | ④㉘ Condenser (1250 mmfd.)... 5886 |
| ㉙ Condenser (3000 mmfd.)... 30-4042 | ④㉙ Power Transformer..... 32-7216 |
| ㉚ Condenser (.05 mfd.)..... 30-4020 | ④㉚ Resistor (32,000 ohms).... 3525 |
| ㉛ Resistor (10,000 ohms).... 33-1000 | ④㉛ Condenser (.01 mfd.)..... 30-4051 |
| ㉜ Condenser (110 mmfd.)... 30-1031 | ④㉜ Filter Cond. (4-8 mfd.)... 30-2105 |
| ㉝ Resistor (190,000 ohms) . . . 33-1116 | ④㉝ Filter Choke..... 32-7215 |
| ㉞ Condenser (.05 mfd.)..... 30-4020 | ④㉞ Condenser (.15 mfd.)..... 30-4191 |
| ㉟ Resistor (32,000 ohms).... 3525 | ④㉟ Antenna Choke..... 32-1372 |
| ㊱ Resistor (51,000 ohms).... 5868 | *④㊱ Spark Plug Resistor..... 33-1192 |
| ㊲ Resistor (5000 ohms)..... 33-1155 | Distributor Resistor..... 4851 |
| ㊳ Condenser (10-10 mfd.)... 30-2106 | Interference Condenser... 30-4007 |
| ㊴ Condenser (250 mmfd.)... 30-1032 | ④㊴ 4-prong Socket..... 27-6006 |
| ㊵ Resistor (50,000 ohms).... 33-1163 | ④㊵ 5-prong Socket..... 27-6014 |

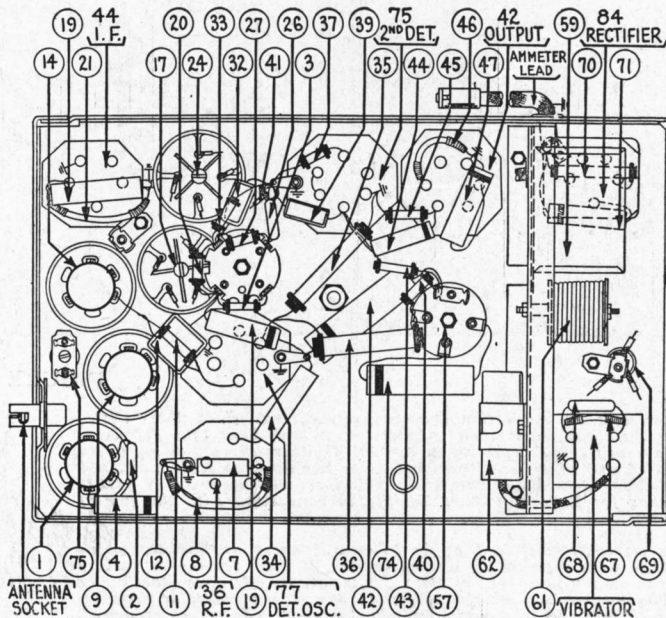


FIGURE 6

- | | |
|------------------------------|---|
| 6-prong Socket..... 27-6020 | *Knob..... 27-4098 |
| Antenna Lead..... 38-5131 | Knob (tone control)..... 03064 |
| *Ammeter Lead..... 38-6339 | *Lock (Less Keys)..... 28-8166 |
| *Stud..... 28-6231 | *Speaker Cable (speaker end) 36-3350 |
| Nuts (set mtg.)..... W55A | *Knob (President)..... 27-4058 |
| *Flexible Shaft..... 28-8336 | *Flexible Shaft (President) . . . 28-8284 |
| *Dial..... 27-5073 | |

An Antenna Choke, Part No. 32-1372 (75) on the Parts List and Base View has been added. This is connected in series with the Antenna Lead and the Antenna Transformer (1) and Condenser (2).

NOTE: The items marked with an asterisk are rarely required for service and in many cases will not be carried in stock by the local service station. In such cases it will be necessary to order these parts from Philco Transitone, Phila., Chicago, or San Francisco.

The Studebaker DeLuxe Radio, Stock No. AC-266, has been designed by Studebaker and Philco Engineers and is Custom Built by Philco. Sold Exclusively by Studebaker Dealers.

Recommended
STANDARD SERVICE CHARGES
for Repairing Radios



Prepared for the Use of Members of
RADIO MANUFACTURERS SERVICE



- To enable the Radio Serviceman to estimate a correct and fair charge for labor involved in the various radio repair or replacement jobs.