INSTRUCTION DATA
CAR RADIO MODEL 40A051-P

Suppression of Motor Noise

The following procedure has been found to be effective in reducing motor noise to a satisfactory level in most cars. Follow the steps in order as given. Additional procedure which may be required in exceptional cases of motor noise, is not covered here and will be found by referring to current literature on this subject.

GENERATOR CONDENSER — A generator condenser is required in all cases Connect the condenser lead to the battery terminal of the generator. The case and mounting strap of the condenser to ground. This unit, therefore, must be well grounded at its mounting

CAUTION—In cars with automatic regulators it is important not to connect the condenser across the field terminal. Most manufacturers at the present time have a recommendation for the proper post at which to connect the condenser.

DISTRIBUTOR SUPPRESSOR—A distributor suppressor will be required in most cases. Remove the high tension lead to the distributor. Insert the suppressor into the distributor cap and connect the wire to the other end of the suppressor. If this is not practical, cut the high tension lead CLOSE TO THE DISTRIBUTOR and use a wood screw end type distributor suppressor in this line.

WITHDRAW ANTENNA CABLE PLUG

Turn on the radio and start the motor.

If motor noise is heard, proceed as follows:

SHIELDING HIGH TENSION LEAD—In cars in which the coil is mounted on the instrument panel or on the driver's side of the fire wall, it is sometimes necessary to shield the high tension lead between the coil and the distributor.

To do this, cover this lead first with loom and then with braided shielding. Run this lead as directly as possible from the coil to the distributor. Ground one end of the shielding to the instrument panel or fire wall, depending on which is closer, and the other end to the motor block.

BONDING CABLES—Try grounding to the fire wall all cables and tubing which pass through it such as oil lines, gas lines, etc. By means of a file, contact can be established between any of the lines and the fire wall, in order to determine whether such a ground will reduce the noise. To bond the cables to the fire wall, clean the point of contact, wrap a length of braided shielding around the cable, and solder the connection. Then solder the end of the shielding to the fire wall or ground it under a screw head if one is convenient.

Sufficient play should be left in the bonding shielding so that movement of the cables or tubing will not loosen this shielding from the fire wall.

BONDING STEERING COLUMN, ETC.—It is possible for the steering column foot pedals, and brake lever to carry interference to the back of the fire wall at which point it may affect the radio. See if each of these items are well grounded to the frame of the car. By means of a file or a braided shielding jumper, contact can be established between any of these items and the frame in order to determine whether such a ground will reduce the noise. A piece of one inch braided shielding should be used if such a ground is necessary and this shielding may be grounded under a screw-head, nut, or may be soldered in position.

THEN REINSERT ANTENNA CABLE PLUG

If motor noise is heard when the antenna cable is reconnected proceed as follows until the noise is satisfactorily reduced

DOME LIGHT LEAD—Noise due to radiation from the dome light lead is generally experienced only when a roof antenna is being used. Disconnect the dome light lead connection at the back of the instrument panel and ground this wire. If this is found to reduce the noise noticeably, interference is being radiated by the dome light lead. Reconnect the dome light lead and then connect a .5 mfd. bypass condenser between the point at which this lead leaves the pillar post and ground.

BYPASS CONDENSERS — Try a .5 mfd. bypass condenser from the ammeter to ground and see if interference is reduced. Install this condenser permanently if there is an improvement

In like manner, try a .5 mfd. condenser from car fuse to ground, switch to ground, tail light and stop light connections to ground, windshield wiper and various other 6 volt connections to ground, noting what effect these condensers have on the noise pick-up.

Try a .5 mfd. condenser from the "Hot" side of the coil primary to ground.

The electric gauges used for oil, water, and gas, are often a source of interference and bypass condensers should be tried.

HIGH AND LOW TENSION LEADS—In some cases, the high and low tension leads between the coil and distributor are run close together. In some cars, they are in the same conduit. If this is the case, remove the low tension lead from this conduit. In any event, keep the high and low tension leads as far apart from each other as possible. If separating the two leads is not sufficient, shield and ground the shield of the low tension lead.

GROUNDING MOTOR AND OTHER PARTS—The motor must, in every case, be well grounded to the frame of the car. If it is not, use a very heavy braided lead for this purpose, similar to a storage battery ground lead. In like manner, it may be necessary to check the grounding of the metal fire wall, instrument panel, transmission, radiator, hood, and muffler to the frame of the automobile. To obtain a good electrical connection, scrape off the paint, if necessary, at the point where ground contact is made.

PEENING ROTOR ARM—In extreme cases of motor noise, it is advisable to peen the distributor rotor arm, that is, increase the length of the arm by using a small machinist's hammer. This will lessen the gap between the rotor arm and the stationary contacts, reducing the spark. Be sure, after peening the arm, that it does not strike the stationary contacts.

SPARK PLUG SUPPRESSORS—If motor noise persists, spark plug suppressors must be installed. One suppressor is put on each plug. These are not regularly supplied with the radio and must be purchased extra. Ninety-five per cent. of all cars will not require spark plug suppressors.

Care should be taken that a good mechanical and electrical connection is made between the spark plugs, suppressors, and plug wires.

WHEEL OR BRAKE STATIC—Noise from this source is generally experienced only when an under car antenna is being used. To determine if noise is being caused from this source, set the car in motion; then with the motor shut off and the clutch disengaged, apply the brakes. If the noise stops, the source of the static is in the wheels. The use of a front or rear wheel static eliminator will generally end the trouble.

INSERTING VIBRATOR UNIT

IMPORTANT—The vibrator unit can be inserted in two ways. The proper method of insertion will depend on which terminal of the car battery is grounded. If the POSITIVE (+) terminal of the car battery is grounded, line up the + mark on the top of the vibrator with the arrow on the chassis base. If the NEGATIVE (—) terminal of the car battery is grounded, line up the — mark on the top of the vibrator with the arrow on the chassis base.

REMOVING CHASSIS COVER

Unscrew the four cover screws. The end of the cover at which one screw is used has two hooks which act as hinges. Swing the cover away from the chassis case until these two hooks are free from their holes

BATTERY CABLE AND FUSE

The battery connection is made at the ammeter. The end of the battery cable with the connecting lug is secured to one of the posts at the back of the ammeter in the instrument panel. The other end of the cable with the fuse receptacle connects to the battery cable from the radio after the fuse has been inserted.

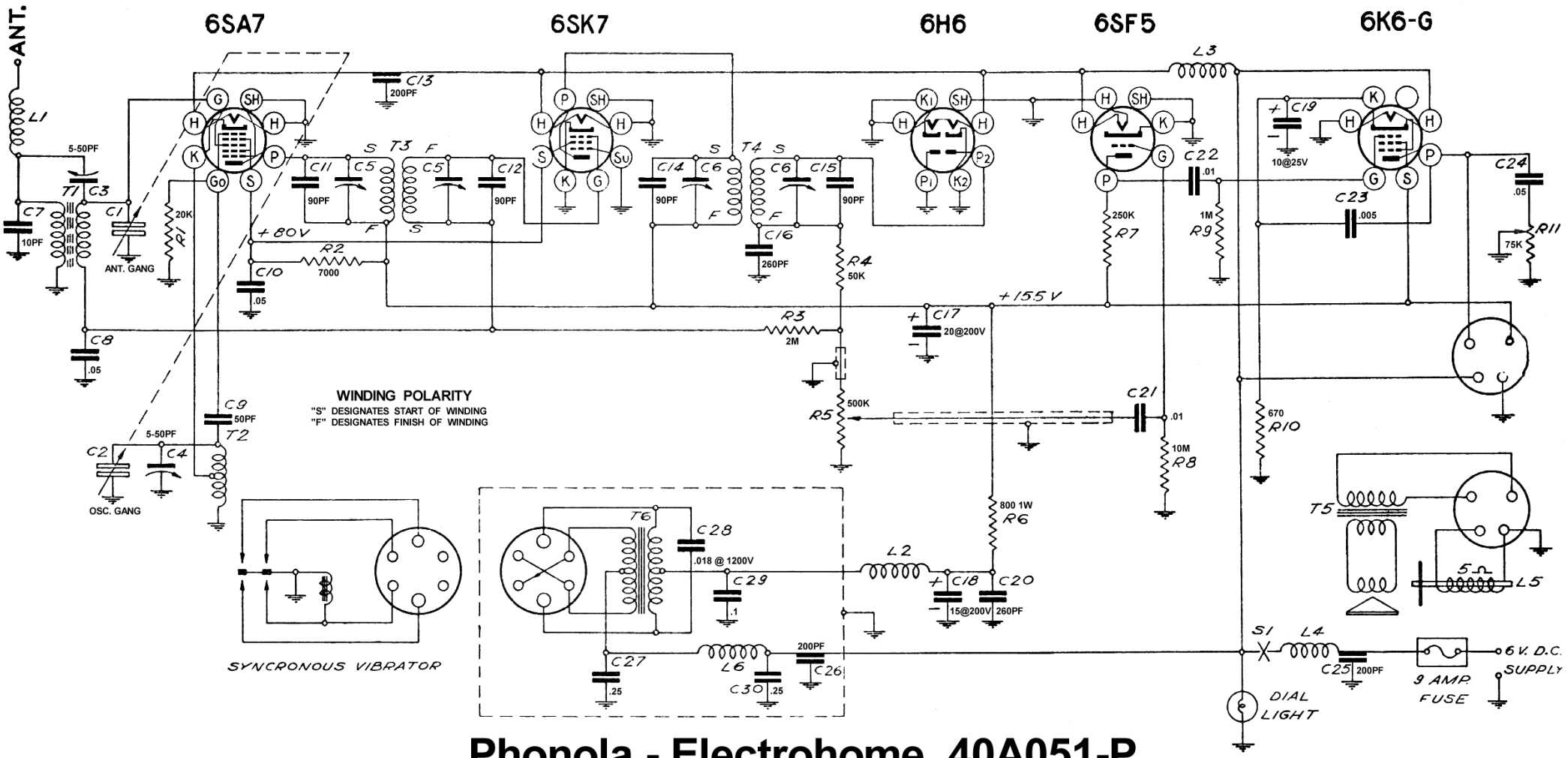
A 9 ampere automobile fuse is used.

DIAL LAMP

A No. 51 bayonet pin base lamp is used. To replace the lamp, take off the chassis cover and lift the lamp socket assembly off the bracket.

ANTENNA

In cars with steel roofs it will be necessary to use a door hinge, fish pole, over-the-roof, or running board antenna. In all of the above installations, the antenna should be mounted on the same side of the car the radio is mounted or the same side as the antenna socket is located.



Phonola - Electrohome 40A051-P

RCC - Phonola Data Sheet 155 - 1941-42

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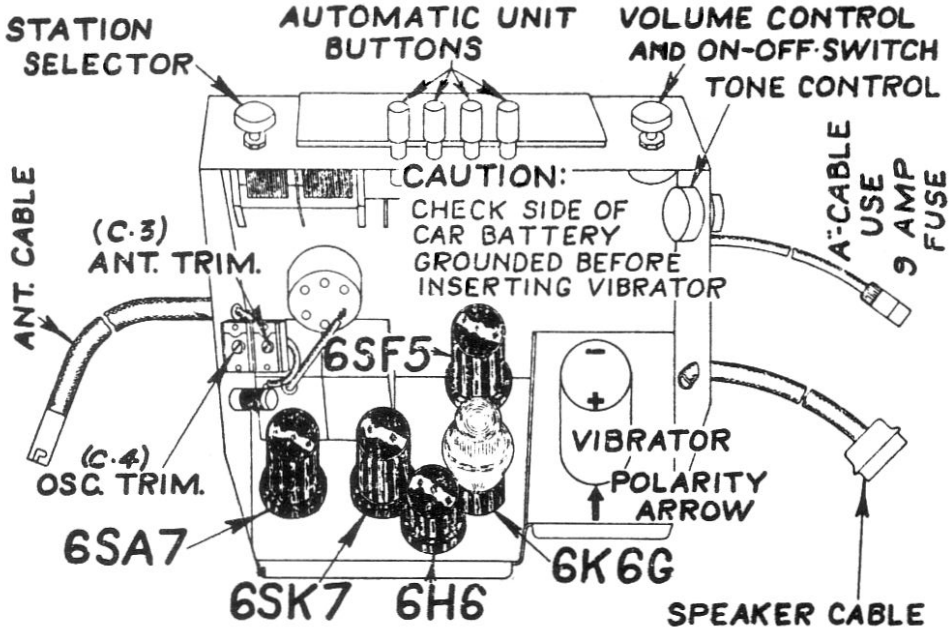
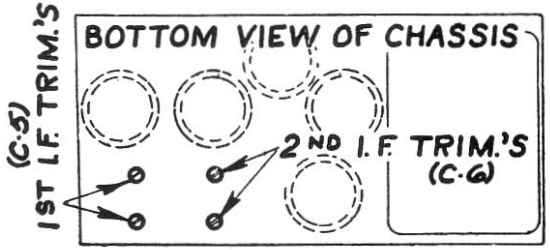
6 VOLT AUTOMOBILE RADIO





Tube and Vibrator Location.

ALIGNMENT — PROCEED IN SEQUENCE LISTED.

On our later models (1) R-3 is connected to 2nd I. F. secondary instead of R-4, (2) the tone control end and arm is returned to the 6K6G cathode instead of ground,

Band	Switch Setting	Dummy Antenna	Connect Generator To	Radio Dial Setting	Generator Frequency	Trimmer Adjusted	Adjustment	Note	Appr. Sensity. For 50 M. W. Output
2nd I. F.									
1st I. F.		.1 Mfd.	Grid of 6SA7 Converter	1550 K.C.	455 K. C.	1st I. F. C-5	Maximum Output		35 Microvolts
Antenna 1460 K. C.		100 Mmfd.	Antenna	1460 K. C.	1460 K. C.	B.C. Osc. C-4 B.C. Ant. C-3	Maximum Output		5 Microvolts
Oscillator 600 K. C.		100 Mmfd.	Antenna	600 K. C.	600 K. C.			Check Only	10 Microvolts