

SECTION 11-B RADIO

CONTENTS OF SECTION 11-B

Paragraph	Subject	Page
11-3	Buick Radio Description and Operating Instructions.....	11-5
11-4	Radio Trouble Diagnosis—On Car.....	11-7
11-5	Radio Adjustments—On Car.....	11-9
11-6	Radio Installation Instructions.....	11-9
11-7	Radio Service Parts—Alignment Procedures.....	11-15

SERVICE BULLETIN REFERENCE

Bulletin No.	Page No.	SUBJECT

11-3 BUICK RADIO DESCRIPTION AND OPERATING INSTRUCTIONS

a. Description

The Buick radio installation consists of a receiver set with built in speaker mounted at the center of the instrument panel, and a sectional antenna mounted just above the center of windshield on all models except 76 X. Model 76 X has an electrically operated antenna mounted in a fender. The *Selectronic* radio installation also includes a foot control switch mounted on the toe panel to left of the brake pedal. Some installations may also include a separate speaker mounted on the shelf behind the rear seat.

The *Sonomatic* radio receiver has five push buttons for touch-tuning of five pre-selected stations. In addition to the push buttons, a control knob permits manual selection of other stations.

The *Selectronic* radio receiver contains an automatic signal-seeking tuner by which the operator can change stations by merely depressing the single selector bar on the receiver, or the foot control switch on the toe panel. The seeking operation is a uni-directional sweep of the broadcast band from low to high frequency with nearly instantaneous return. The tuning mechanism is driven by a spring loaded mechanical motor which is stopped on station by

a triggering circuit actuated by voltage developed from an incoming signal. The number of stations on which the tuner will stop can be regulated by use of the sensitivity control knob on the receiver. In addition to the automatic tuning, a control knob permits manual selection of stations if desired.

All receivers have a terminal post on the output transformer to provide a connection to the rear seat speaker when this is installed on the rear compartment shelf.

The antenna (except Model 76 X) may be rotated from the "down" to the "upright" positions by turning the control knob located just above center of windshield. The rod extensions must be extended or retracted by hand, working on outside of body. The antenna is hinged so that it will not ordinarily be damaged when coming in contact with low hanging limbs or other obstructions. Locally strong stations can usually be tuned in with antenna in the down position; locally weak stations will require the antenna to be raised upright and fully extended.

Model 76 X (Skylark) is equipped with an electric motor driven antenna mounted in the left front fender. See figure 11-11. The motor drives two friction pulleys against a nylon tape attached to the upper section of the antenna. A two-position toggle switch on lower edge of instrument panel controls the motor, which will run in either direction. Lifting the switch

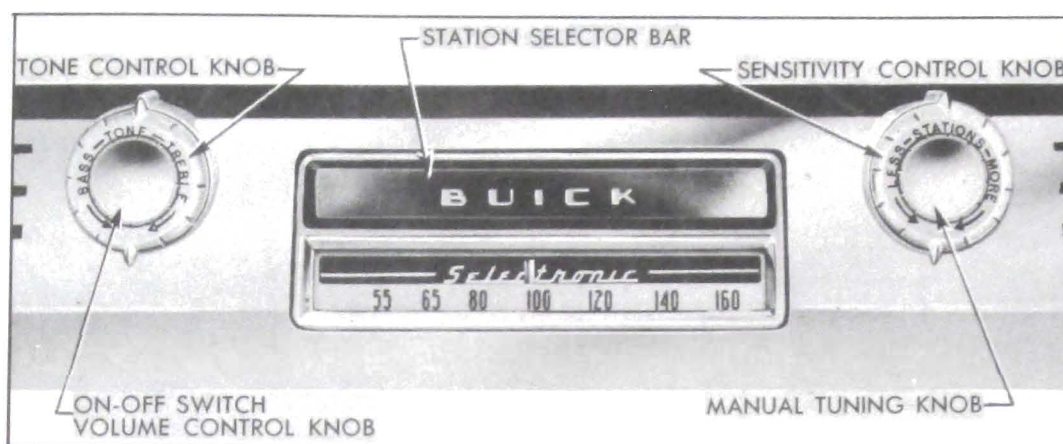


Fig. 11-6—Receiver Controls—Selectronic Radio

handle raises the antenna and pushing handle down lowers the antenna. When handle is released it returns to "Off" position.

b. Switch, Volume, and Tone Control Operation

CAUTION: *The radio should be turned off while starting the engine because certain radio parts may be damaged if cranking motor is operated with radio turned on.*

Clockwise rotation of the switch knob, to left of dial, turns the radio on, and further rotation increases the volume. Rotation clockwise of the tone control knob, behind the switch knob, to extreme "treble" position gives the full tone range which will reproduce speech very clearly and distinctly. Rotation counterclockwise toward "bass" diminishes brilliance and accentuates low notes. See figure 11-6.

When a rear seat speaker is installed, a separate speaker selector switch is mounted on lower edge of instrument panel. The fully counterclockwise position of selector switch knob turns on the rear speaker only, the midway position turns on both speakers, and the fully clockwise position turns on the front speaker only.

c. Push Button Tuning Operation

To tune in the station for which the push button is set simply push the button in as far as possible. The button will move easily at start, then a slightly harder push is required to complete the travel. At end of button travel the tuner will move to the station for which the button has previously been set as described in paragraph 11-5 (b).

d. Selective Tuning Operation— Selectronic Radio

NOTE: *To insure adequate sensitivity for selective tuning of the Selectronic radio it is necessary to have antenna in upright position and fully extended.*

With the radio turned on, selective tuning of available stations is accomplished by depressing either the selector bar above the dial (fig. 11-6), or the foot control switch on toe panel to left of the brake pedal.

When the bar or switch is fully depressed and released the tuner will automatically move to the right and stop, accurately tuned, when it reaches the next station having adequate strength to stop it. The tuner will stop at a station having adequate strength even though the volume control is not turned up high enough for the station to be audible.

When the tuner reaches the right end of the dial it flies back to the left end and again starts moving to the right until it reaches a station having sufficient strength to stop it. By holding the selector bar or foot control switch down, unwanted stations or areas of the dial can be quickly passed over.

The number of stations on which the tuner will stop in selective tuning can be regulated by manual setting of the sensitivity control knob, which is located behind the manual tuning knob to right of the dial. See figure 11-6. This is a step control having four positions. This control is in the circuit only while the tuner is seeking and does not affect the "on station" sensitivity of the receiver.

Turning the sensitivity control knob clockwise, in the direction of arrow marked "MORE,"

increases the number of stations that can be tuned in. Turning knob counterclockwise, in direction of arrow marked "LESS," decreases the number of stations by eliminating those having weak signal strength in the area where car is located. In the extreme "LESS" position of control knob the tuner usually will stop on the strong local stations only.

If the Selectronic tuner is operated in certain localities or in certain types of buildings where a strong signal is not available, the tuner will automatically search the band from one end to the other without stopping until the sensitivity control knob is turned clockwise to include more stations, or until the radio is turned off.

e. Manual Tuning Operation

The manual tuning knob is to right of the dial. See figure 11-6. On the *Sonomatic* radio, this knob may be used to tune in stations other than those for which the push buttons are set; it is also used when tuning to set the buttons for selected stations. On the *Selectronic* radio, the tuning knob may be used to tune in stations that are too weak to stop the electronic tuning mechanism.

When tuning manually, and particularly when setting up a station on one of the *Sonomatic* push buttons, careful adjustment of the tuning knob is essential to good radio reception.

On *Sonomatic* radio, if the program sounds screechy or distorted, it is probably caused by improper tuning and can be corrected by adjusting the tuning knob slightly. Since the low notes are more affected by tuning than the high ones, it is a good plan to tune the set to a point where the low notes are heard best and high notes are clear but not screechy. Turning the control knob back and forth until the station is almost lost on either side will enable the operator to hear the difference in reception and select an intermediate position giving best results.

11-4 RADIO TROUBLE DIAGNOSIS— ON CAR

The trouble diagnosis information in this paragraph is of a non-technical nature. It is intended as an aid in locating minor faults which can be corrected without a specialized knowledge of radio and without special radio test equipment. If the suggestions given here do not affect a correction, further testing should be done *only by a trained radio technician having proper test equipment.*

a. Radio Is Inoperative or "Dead"

1. Turn on the radio. The dial should light and the vibrator should buzz.

2. If dial does not light, disconnect the "A" lead cable and check the fuse located in the receptacle. If fuse is blown it indicates a sticking vibrator; replace fuse and check vibrator, step 3. If fuse is okay check "A" lead cable for proper connection to No. 1 terminal of lighting switch and check cable for open circuit. If source of trouble has not been found, remove receiver for test by a trained radio technician.

3. If vibrator does not buzz when fuse is okay, remove receiver cover and tap the vibrator. If vibrator starts after tapping, or after installation of a new fuse, let it run for about 15 minutes and then check for any tendency of vibrator to stick by turning radio on and off repeatedly.

Replace the vibrator if it will not start or has a tendency to stick. Replace vibrator if it buzzes unevenly or is exceptionally loud.

4. If vibrator buzzes but radio is dead, check the tubes by replacing one at a time until the bad one is located, or test the tubes with a reliable checker if available.

5. If fuse, vibrator, and tubes are satisfactory, substitute a test antenna consisting of a piece of wire about 10 feet long connected to a standard antenna lead-in cable. Place test antenna outside and away from the car. If radio operates near normal with substitute antenna, some part of car antenna or lead-in is at fault.

Lead-in wire may be checked for "grounds" by removing lead-in cable connector from radio receiver and checking with an ohmmeter from connector tip to car body. This check should show an entirely "open" circuit. CAUTION: *Do not check with a lamp or any device drawing current, since the conductor inside loom is only .010" in diameter and will burn off easily if grounded.*

6. If source of trouble has not been found remove the receiver for test by a trained radio technician.

b. Radio Reception Is Weak

1. Fully extend the antenna and turn on radio. Turn volume control to maximum position and tune across the dial.

2. If reception seems just slightly weak, tune in a station having good volume for listening and grasp the antenna rod with your hand. If volume increases adjust the antenna trimmer

(par. 11-5). If volume decreases proceed with the following steps.

3. Check for weak tubes by replacing one at a time until the faulty one is located, or test the tubes with a reliable checker if available.

4. If tubes are okay, substitute a test antenna as described in step 5, subparagraph a, above. If this does not reveal source of trouble remove the receiver for test by a trained radio technician.

c. Radio Noisy with Car Standing Still

1. Close and securely latch hood before checking for noise.

2. Start engine, turn on radio and tune radio to a spot between stations. Engine noise will usually appear in radio as a clicking sound that varies in frequency with speed of engine. If noise is present disconnect antenna lead-in cable from receiver.

3. If engine noise stops when antenna is disconnected, check all high tension wires for full seat in sockets of coil and distributor cap. Check distributor rotor (resistance type) by substituting a known good one.

4. If distributor rotor does not correct the noise, check antenna lead-in cable shield for proper ground (par. 11-6, d).

5. If engine noise continues with antenna disconnected, check ignition coil and generator capacitors for clean, tight connections; also check the bond strap between engine and cowl to make sure that it has clean tight connections at both ends. Observe generator armature and brushes; if sparking is excessive, check for open armature.

6. If source of noise has not been found, replace ignition coil and generator capacitors with known good ones. Ignition coil capacitor lead must be attached to battery terminal of coil. Generator capacitor lead must be connected to "A" terminal of generator. Both capacitors must have clean metal ground contact.

7. If engine noise is present when engine is running at approximately 2000 RPM, and all items mentioned above are satisfactory, the noise is probably due to the generator regulator. Correction may be made by mounting a .3 to .6 mfd capacitor at one of the regulator mounting ground screws and attaching the capacitor lead to the "BAT" terminal of regulator.

d. Radio Noisy with Car Moving at High Speed

1. Turn on radio and check for engine noise as described in subparagraph c above. If engine noise is present, correct as outlined.

2. Drive over different types of roads, especially macadam, with radio on and tuned between stations. Listen for presence of wheel or tire static. In mild form this static shows up as a click in radio that increases with speed; when more severe it shows up as heavy static or a constant roar. The surface of the road determines the strength of static discharge. Wheel or tire static very seldom occurs on dirt or gravel roads.

3. If wheel or tire static is present, apply brakes lightly and if noise decreases check front wheels to see that static collectors have been properly installed and make sure that all grease has been wiped off contacts.

4. In certain cases of wheel or tire static, the front wheel static collectors alone may not completely eliminate all noise from this source. Static Eliminator Powder, available through G.M.P.D. parts warehouses under Group 9.674, may be used in cases where proper conditioning of static collectors does not remedy tire static. An injector for installing the powder is also available under the same group number. This powder equalizes the positive and negative charges developed by the tire, thus neutralizing the corona effect and eliminating radio interference difficulties from this source.

e. Radio Noisy on Rough Road

1. Turn on radio and check for engine noise as described in subparagraph c above. If engine noise is present, correct as outlined.

2. Jar the receiver by striking the case with heel of hand, or a rubber mallet. If this produces noisy reception, remove receiver cover and tap each tube with handle of screwdriver until noisy tube is found. Make sure that all tubes are firmly pressed into sockets. If this does not correct the noise, remove receiver for test by a trained radio technician.

3. If noisy reception is not produced when receiver is jarred, fully extend antenna and turn radio volume control on full. If noise appears in speaker check antenna and lead-in wire for loose connections. If wiggling lead-in does not cause noise, rap antenna rod with insulated end of screwdriver; if noise then appears, check an-

tenna for shorting to car body or corrosion between antenna sections.

11-5 RADIO ADJUSTMENTS—ON CAR

When making the adjustments covered in this paragraph it is essential to have the car in a location that is as free as possible from outside interference.

a. Antenna Trimmer Adjustment

An antenna trimmer adjustment is provided for matching the antenna coil in the receiver to the car antenna. *This adjustment must always be made after installation of receiver and antenna, or after any repairs to these units.* The adjustment should also be checked whenever the radio reception is unsatisfactory.

1. Raise antenna to maximum height.
2. Tune radio to a station between 600 and 1000 K.C. that can barely be heard with volume turned full on.
3. Insert a screwdriver through the opening in receiver cover labeled "Antenna Trimmer Adjustment" and carefully turn the trimmer screw back and forth until a position is found that gives maximum volume.

b. Setting Push Buttons to Desired Stations

1. Turn on the radio.
2. Pull button to left and all the way out.
3. Carefully tune in the desired station manually, then push the button all the way in.
4. Move dial pointer away from the selected station and push the button to make certain the station will be properly tuned in.
5. Turn tuning knob back and forth to make certain that best tuning is obtained with the push button. If best tuning is not obtained, repeat steps 2, 3, 4.

11-6 RADIO INSTALLATION INSTRUCTIONS

If radio parts are removed from car for any reason, the following instructions must be carefully observed to insure proper reinstallation and satisfactory operation. These instructions cover reinstallation only; if an original installation is to be made carefully follow instructions contained in the parts package, particularly with reference to cutting holes in sheet

metal and trim.

IMPORTANT: *The standard Buick antenna is matched with the receiver within the range of the trimmer adjustment. Other antennas may not match the receiver within the range of the trimmer adjustment; therefore the use of other than a standard Buick antenna is not recommended.*

a. Installation of Receiver

1. The radio hangers must be bolted to the radio support brackets with slot openings toward front of car.

2. If rear seat speaker is used, remove back cover of receiver and insert the two-wire cable from the speaker selector switch through a vent hole in bottom of receiver, pushing the rubber grommet into place in vent hole. Connect wires to the receiver and reinstall receiver cover.

CAUTION: *Carefully support receiver until it is installed, to avoid straining the wire connections to speaker selector switch.*

3. Install receiver by sitting in front seat holding receiver at arm's length while the two threaded bushings are inserted through control holes in speaker grille and the studs on side of receiver are engaged in the extended lip on the hangers.

4. Install and tighten hex nuts on threaded bushings. Hold receiver so that rubber gasket at speaker opening touches the back of speaker grille, then install large flat washers, lock-washers and nuts on receiver studs and tighten nuts securely.

5. Install tone control knob, felt washer, and volume control knob on shaft to *left* of the dial. Install dummy knob, felt washer, and tuning control knob on shaft to *right* of the dial. See figure 11-6:

To install outer knobs simply push them on shafts as far as possible. To remove either knob, insert a small screwdriver in slot on edge of knob and pry against the flat spring located inside the knob.

6. Connect the "A" lead cable to one of the No. 1 (unprotected) terminals of lighting switch. *Never connect to any other terminal.* Install proper fuse (par. 10-5, b) in receptacle and connect lead to socket in receiver toward left side of car.

7. Connect antenna lead-in wire to receiver,

then make antenna trimmer adjustment (par. 11-5). **CAUTION:** *Make certain that leads do not contact windshield wiper drive cables when wiper is running.*

8. If *Selectronic* foot control was disconnected or removed, reinstall with cable running up behind left edge of steering column pad into wiring harness clips on rear side of cowl. Plug cable into receiver and attach it to clip on receiver cover. **CAUTION:** *Make certain that cable does not contact windshield wiper drive cables when wiper is running.*

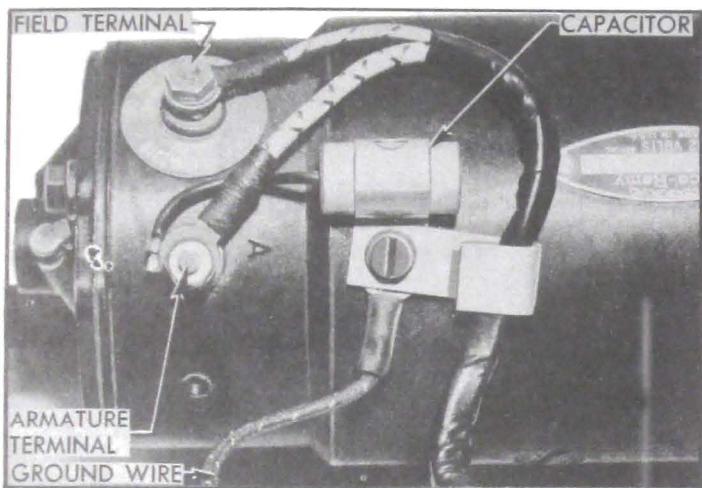


Figure 11-7—Capacitor Mounted on Generator

b. Installation of Interference Suppression Parts

Figure 11-7 shows proper installation of the capacitor to prevent interference caused by the generator. Note that the capacitor lead is connected to the armature ("A") terminal of generator. Capacitor must never be connected to the field ("F") terminal as this will cause bad pitting of the voltage regulator points, thus preventing it from operating properly.

The standard distributor rotor contains a 10,000 ohm resistor which eliminates the suppressor formerly installed on the coil-to-distributor high tension wire.

The coil capacitor is mounted on the coil bracket and the lead is connected to the battery positive (+) terminal of coil. See figure 10-46. If capacitor is connected to the distributor negative (-) terminal excessive pitting of distributor contact points will result.

A static collector is installed in each front wheel hub grease cap. For good results the grease cap and the center of steering knuckle spindle must be clean and free from grease. The center of static collector is made of self-lubricating material.

In addition to the items mentioned above, a bond strap is connected between the engine and cowl. On *Series 40*, the bond strap is attached to the temperature gauge tube. On *Series 50-70*, it is a separate strap on right rear corner of engine.

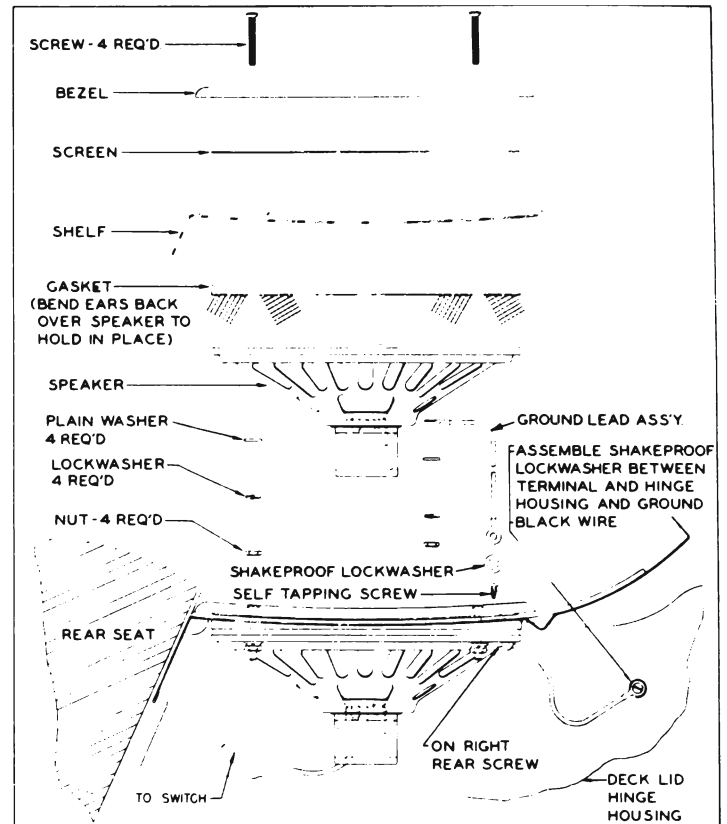


Figure 11-8—Rear Seat Speaker Installation

c. Reinstallation of Rear Seat Speaker

If rear seat speaker is removed for any reason, be sure to reinstall the speaker, rubber gasket, grille screen, and bezel as shown in figure 11-8. Place one terminal of the black ground wire under the right rear speaker mounting nut. The other end of ground wire is attached to the right trunk lid hinge guard with a screw and a shake proof washer placed between terminal and hinge guard.

d. Antenna Installation—Closed Bodies and Model 45R

1. Apply masking tape to instrument panel along the right windshield garnish molding to protect the finish. Remove right section of garnish molding.

2. Attach antenna lead-in cable to windshield garnish molding with clips located so that molding screws will pass through them. Cable must be on rear side of molding and a clip must be at every screw that cable passes so that cable will not be damaged by molding screws. Two short clips are used on side of molding and

two or three long clips are used along top of molding, depending on location of hole in header through which cable will be threaded in step 4, below.

3. With shielding braid located above the lower right clip, attach cable ground terminal to body pillar where a screw hole is provided. Be sure to clean paint from pillar at this point and attach the terminal with a 10-32 x $\frac{5}{16}$ " tapping screw, with internal-tooth lockwasher placed between terminal and pillar. See figure 11-9.

4. Thread lower end of cable down through opening at right end of instrument panel, snake upper end of cable up through hole in header (near center) and out through holes in header reinforcement and headlining, then install windshield garnish molding. **CAUTION:** *Pull gently on cable—a hard pull may break the small lead inside the loom.*

5. Remove glove box and attach lead-in cable to flange of defroster duct, using three clips. See figure 11-9. *Make certain that cable does not contact windshield drive cables, then reinstall glove box.*

6. If antenna tube and rod assembly is not assembled to the antenna control assembly, remove fluted socket set screw from control, insert tube so that the hole in tube aligns with screw hole in control then install and tighten set screw securely. Make sure that rubber pad is securely cemented to control insulator with rubber cement. See figure 11-9.

7. Insert bare end of lead-in wire into the Fahnestock terminal on the hard rubber insulator. Push the slack wire up into the hole, insert insulator up through the hole in the header reinforcement, and locate in the square hole of inner frame. The Fahnestock terminal must be located in the upper *left* corner. See figure 11-9.

8. While holding insulator in place have a helper install the control assembly from outside, then install lockwasher and run lock nut up until the assembly is snug but not tight. Use Wrench J 1340 to turn lock nut. See that point of socket set screw does not strike polished ring on outer end of control.

9. Place tube in the "down" position and raise or lower the inside of the antenna control assembly until the end of the outside tube is 1" from windshield glass. See figure 11-9.

10. Using special Spanner Wrench J 1339 the man on outside must hold the antenna body

so the lowered tube is vertical. Securely tighten the nut on inside, using Wrench J 1340. See figure 11-9.

NOTE: *If there is any doubt of the location of the Fahnestock terminal the lead-in wire should be checked for "grounds" with an ohmmeter. It should, of course, show an entirely "open circuit." Do not check with a lamp or any device drawing current as the conductor inside of the loom is only .010" in diameter and will burn off easily if grounded. For the same reason, care should be taken to see that the bare terminal on the end of the plug does not touch any "hot" terminal behind the instrument panel.*

11. Install antenna escutcheon plate, threading screws into holes provided in header reinforcement. Install knob and tighten set screw securely.

12. If the antenna is not correct distance from the windshield glass in lowered position, the fluted socket set screw can be turned in against the polished ring to make a small adjustment of the antenna rod. This adjustment should be used only for a very slight change.

13. Connect lead-in cable to receiver and make the trimmer adjustment described in paragraph 11-5.

e. Antenna Installation—Convertible and Riviera Bodies

For Model 45 R refer to subparagraph *d*. For Model 76 X refer to subparagraph *f*.

Installation details for other convertible and Riviera models are clearly shown in figure 11-10. The installation procedure is very similar to that on closed bodies (subpar. *d*) except for the following points:

(1) The insulator is installed with the Fahnestock terminal toward *right* side of body.

(2) A rubber pad retainer, rubber pad, and escutcheon are used on outside of header.

(3) The inside excutcheon is integral with the rear view mirror bracket.

(4) The control knob is installed with a spring, spacer, washer, screw, and plug.

(5) Antenna rod is set parallel to windshield glass at center.

f. Antenna Installation—Model 76X

Figure 11-11 shows all necessary details for reinstalling the motor driven antenna in Model 76 X. When the antenna is being installed on a new fender it will be necessary to make a

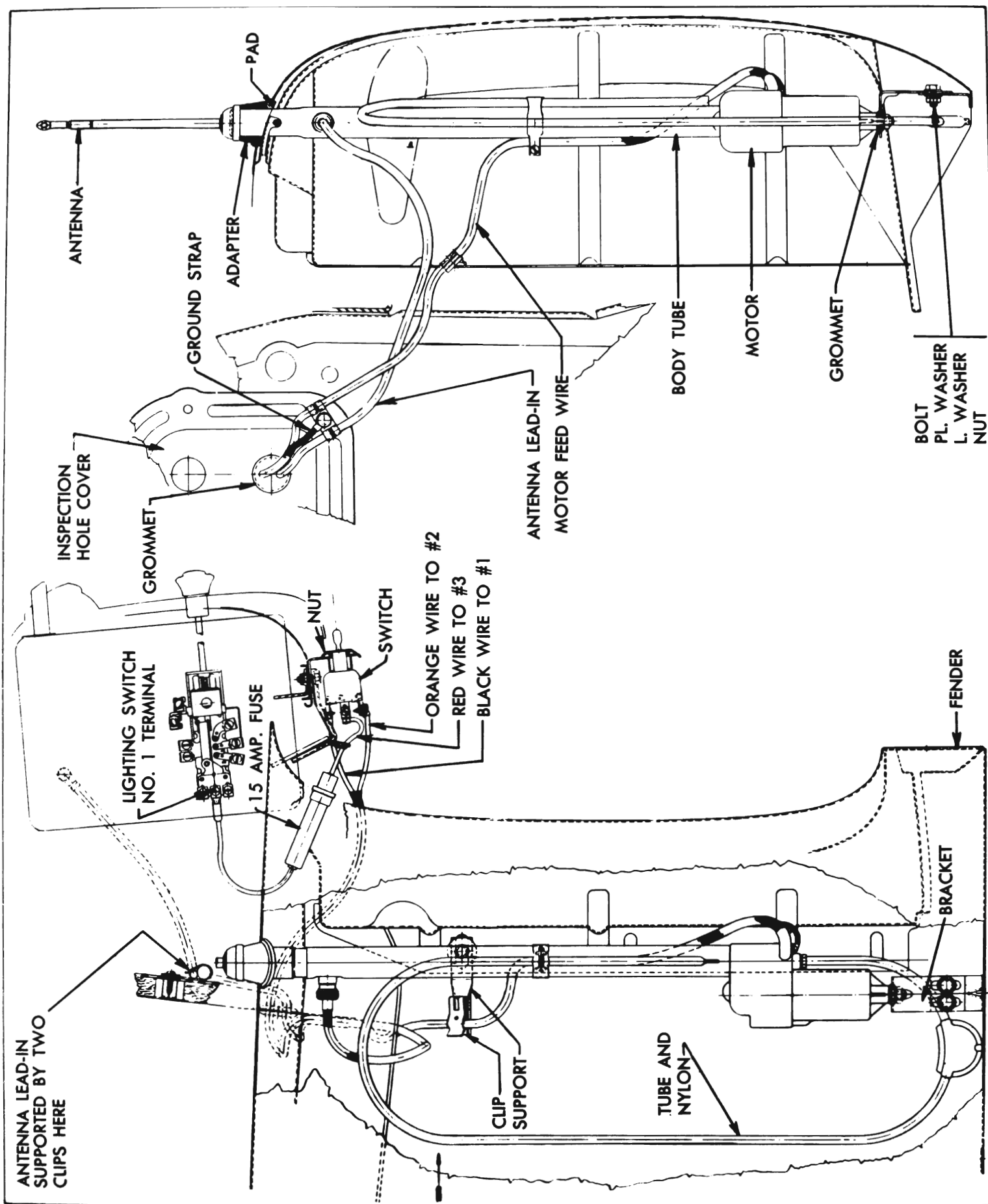


Figure 11-11—Antenna Installation Details—Model 76 X

template from the old fender in order to properly locate and cut the hole for antenna body tube. A template may be obtained from an antenna parts package, if available.

11-7 RADIO SERVICE PARTS—ALIGNMENT PROCEDURES

a. Service Parts

Service parts for Buick radios are marketed through United Motors Service and are listed in the following U.M.S. auto radio bulletins

Series	Type	Model	Bulletin
40	Sonomatic	981320	6D-932
50-70	Sonomatic	981321	6D-933
50-70	Selectronic	981323	6D-935

b. Alignment Procedures

The radio receiver should be functioning before the various aligning adjustments are made. Trouble shooting, if necessary, should precede the final adjustment. *Under no circumstance should alignment be attempted without calibrated test oscillator and output meter, or by untrained personnel.*

The following alignment procedures must be rigidly adhered to and all adjustments must be made in the order given.

c. Sonomatic Radio Alignment Procedure

This procedure applies only to the Model 981320 (6-volt) and Model 981321 (12-volt) radio. See figure 11-15 (6-volt) or 11-16 (12-volt) for location of the adjustment screws indicated.

Output Meter Connections Across Voice Coil
 Generator Return To Receiver Chassis
 Dummy Antenna In Series With Generator

Volume Control Position Maximum Volume
 Tone Control Position Treble
 Generator Output Minimum for Readable Indication

Steps	Series Condenser or Dummy Antenna	Connect Signal Generator to	Signal Generator Frequency	Tune Receiver to	Adjust in Sequence For Max. Output
1 (6-Volt)	0.1 mfd.	6 BE 6 Grid (Pin #7)	262 KC	High Frequency Stop	A, B, C, D
1 (12-Volt)	0.1 mfd.	12 BE 6 GRID (Pin #7)	262 KC	High Frequency Stop	A, B, C, D
2	0.000082 mfd.	Antenna Connector	1615 KC	High Frequency Stop	*E, F, G
3	0.000082 mfd.	Antenna Connector	1000 KC	Signal Generator Signal	J, K
4	0.000082 mfd.	Antenna Connector	1615 KC	High Frequency Stop	F, G
5	0.000082 mfd.	Antenna Connector	1000 KC	Signal Generator Signal	L**

*Before making this adjustment check mechanical setting of oscillator core "H." The rear of the core should be 1²⁵/₃₂" from the mounting end of the coil form. (This measurement is readily made by inserting a suitable plug in the mounting end of the coil form.) Core adjustments should be made with an insulated screw driver, and core studs should be cemented in place with glyptal or household cement after alignment.

**L is the pointer adjustment screw which is on the connecting link, between the pointer assembly and the parallel guide bar. It should be adjusted so that the dial pointer corresponds with the 1000 KC mark on the dial. (On first "0" of "100.")

With the radio installed and the car antenna plugged in adjust the antenna trimmer "G" for maximum volume with the radio tuned to a weak station between 600 and 1000 KC (see sticker on case).

d. Selectronic Radio Alignment Procedure

This procedure applies only to the Model 981323 (12-volt) radio. See figure 11-17 for location of the adjustment screws indicated.

NOTE: When aligning, be sure to use a vacuum tube voltmeter as indicated and be sure to follow the alignment sequence given-(Notice that the primary of the 2nd. I.F. is aligned first).

Output Meter Connection...VTVM from AVC to chassis (see fig. 11-14, Tube View)
 Generator Return.....Receiver Chassis
 Dummy Antenna.....In series with generator

Volume Control.....Maximum Volume
 Tone Control.....Treble
 Generator Output.....Not to exceed 2 volts at VTVM

Step	Dummy Antenna	Connect To	Signal Generator Frequency	Tune Receiver To	Adjust in Sequence for Output Indicated
1	0.1 mfd	12BE6 Grid (Pin 8)	262 KC	*High Frequency Stop	A, B, C (Max.)
2	0.1 mfd	12BE6 Grid (Pin 7)	262 KC	High Frequency Stop	D (Min.)
3	0.000082 mfd	Antenna Connector	1615 KC	High Frequency Stop	**E, F, G (Max.)
4	0.000082 mfd	Antenna Connector	600 KC	Signal Generator Signal	J, K (Max.)
5	0.000082 mfd	Antenna Connector	1615 KC	Signal Generator Signal	F, G (Max.)
6	0.000082 mfd	Antenna Connector	1000 KC	Signal Generator Signal	***L

*To tune to high frequency, put a 0.070" feeler gauge (or bare #13 wire) in slot against the high frequency stop. Depress station selector bar and allow the planetary arm to run against the feeler gauge. Turn the radio off and then back on.

**Before making this adjustment, check the setting of oscillator core "H." The rear of the core should be 1²⁵/₃₂" from the mounting end of the coil form. This measurement is readily made by inserting a suitable plug in the mounting end of the coil form. The core adjustment is made from the mounting end of the coil form with an insulated screwdriver. (It will be necessary to steady the core guide bar while making these

adjustments. This can be done by applying a downward pressure on the guide bar at the antenna coil end.) If this adjustment is necessary, first dissolve the glyptal seal on the core stud and be sure to re-seal after making the adjustment.

***"L" is the pointer adjustment screw on the end of the core guide bar—adjust so pointer reads 1000 KC.

With the radio installed and the antenna plugged in, adjust the antenna trimmer "G" for maximum volume with the radio tuned to a weak station between 600 and 1000 KC (see sticker on case).

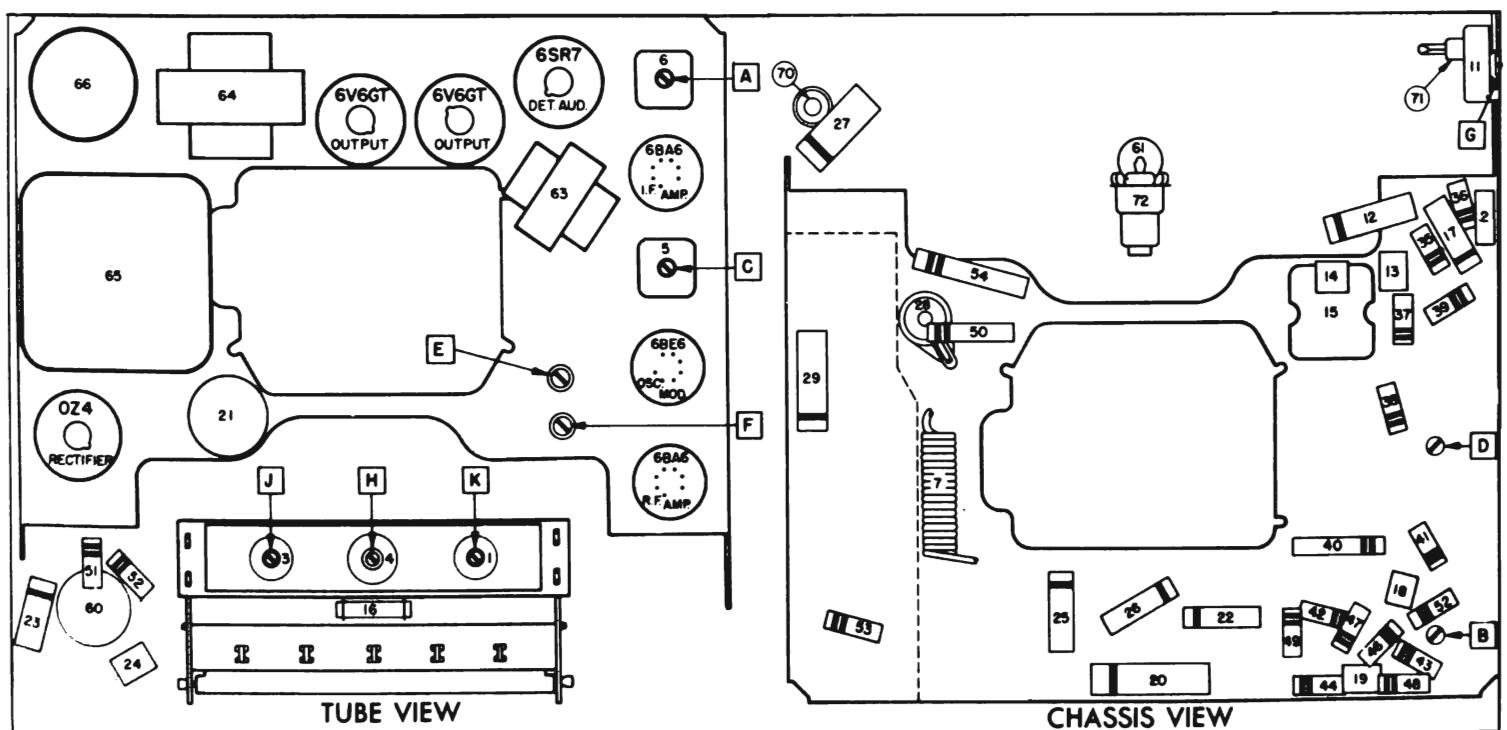


Figure 11-12—Parts Layout—Model 981320—Series 40

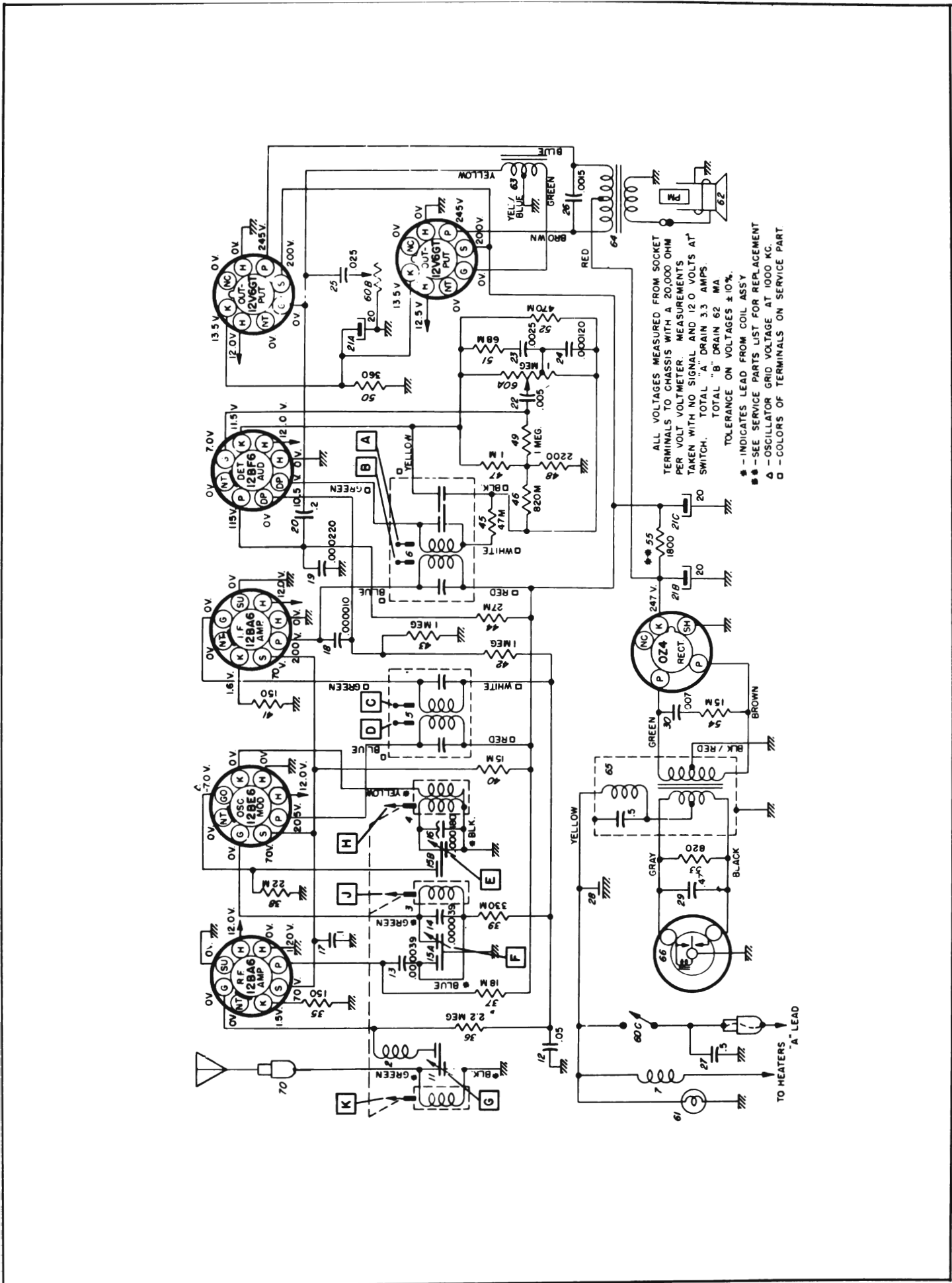


Figure 11-16—Radio Circuit Schematic—Model 981321—Series 50-70

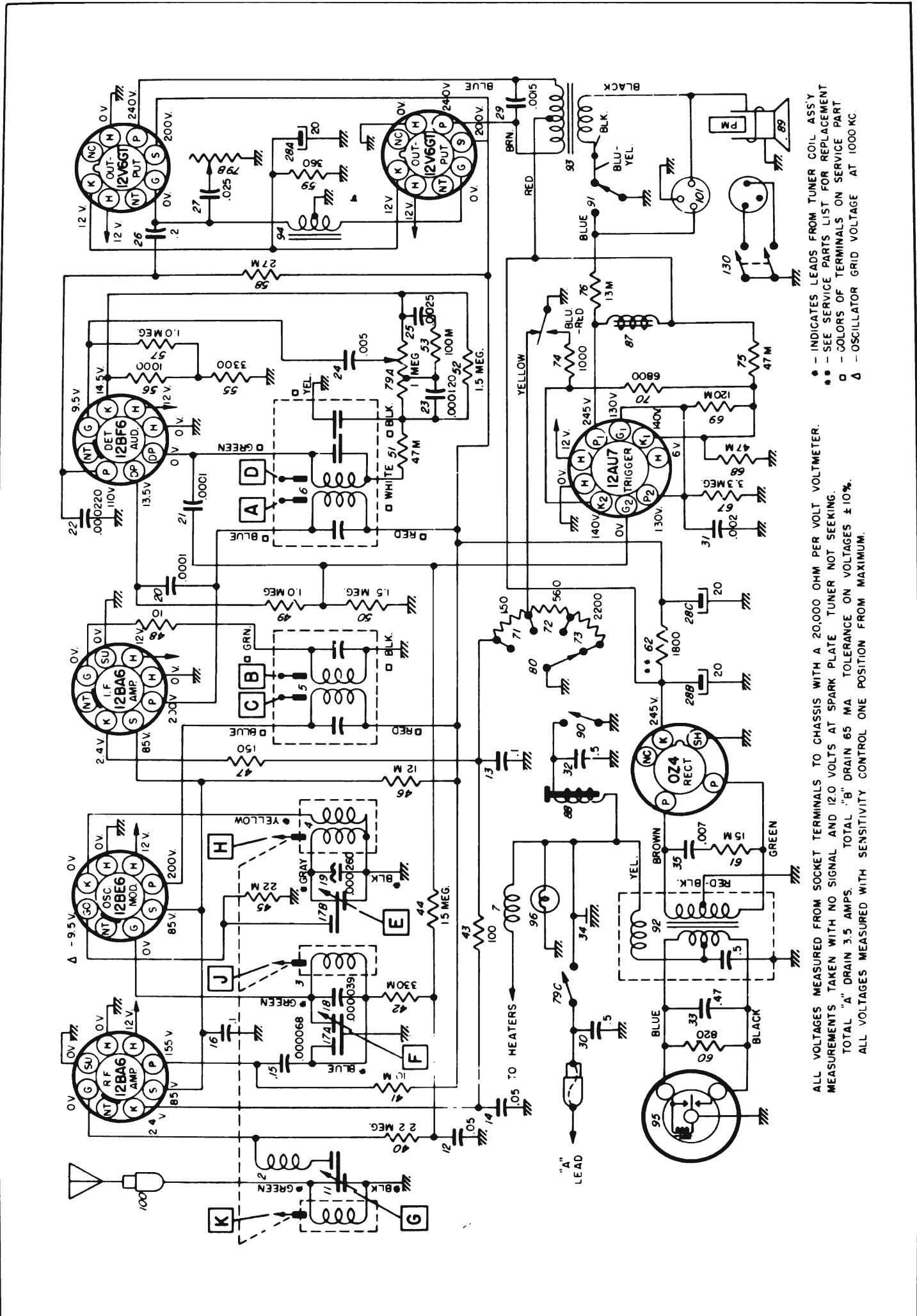


Figure 11-17—Radio Circuit Schematic—Model 981323—Series 50-70