Steering Wheel Controls System Circuit Description

Steering Wheel Radio Control Switches

The steering wheel control switches control the following radio features:

- The preset stations
- The cassette player
- The volume
- The station frequency

Voltage is supplied to the RH steering wheel controls through the STG WHL CNTRL Fuse 3 when the ignition switch is in the ACCY position or the RUN position or the RAP mode is active. The switches are a ladder network consisting of the switches and a series of resistors. The ladder network allows each switch to have a different resistance. The different resistances allow a different voltage output to the radio.

The steering wheel control (SWC) switches use incandescent backlighting. Voltage is supplied to both steering wheel controls for the switch incandescent backlighting through the STG WHL CNTRL Fuse 13. The illumination signal circuit is a pulse width modulated (PWM) signal from the headlight switch. The bulbs are serviceable.

SIR Coil Assembly

The SIR Coil Assembly contains 6 wires, four of which are used by the SWC. The SWC allows voltage to be sent from the steering wheel switches to the radio while the steering wheel is being turned.

Power Antenna System Description

The rear-mounted, telescoping, rod-type antenna fully extends whenever the radio is in use. The antenna retracts when the following conditions exist:

- The radio is off.
- The ignition switch is in the OFF position.
- The retained accessory power (RAP) is inactive.

The antenna mast is attached to a plastic cable that is driven up and down by an electric motor. The motor is automatically shut off by the limit switches when the antenna reaches the full up or full down position.

pink wire

orange wire

Power Antenna System Circuit Description

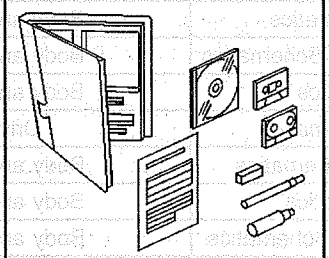
When the radio is turned on, voltage is applied from the radio through to the radio power antenna internal relay coil. The relay contacts close, and battery voltage is applied to the motor. Terminal B of the motor is grounded through the up switch and the relay contacts. The motor drives the antenna mast up. When the antenna is at its full height, the up switch opens and the motor stops.

When the radio or ignition switch is turned off, voltage is removed from the relay coil. The relay contacts open, applying battery voltage to the motor. The motor terminal A is now grounded. The down switch at the antenna now has voltage applied through the relay, and the voltage of the motor has reversed polarity. It runs in the opposite direction, retracting the antenna mast.

At the end of the antenna's travel, the down switch opens and breaks the current flow. Both sets of switches are now in the places shown in the schematic, the radio is off, and the antenna mast is down.

The antenna is connected to the radio by coaxial cable.

Special Tools and Equipment

Illustration	Tool Number/ Description
 3430	J 39200 Digital Multimeter
 65874	J 39916-A Audio System Diagnostic Kit

Power Antenna Schematics (Pontiac, Chevrolet: Japan, Europe) (Coupe and Convertible: Antenna, Radio)