

## MAZDA MIATA **PASSENGER AIRBAG SWITCH INSTALLATION**

**NOTE:** As a system "pre-check", perform the following to verify system operation. Turn the ignition to the RUN position. Verify that the AIR BAG warning lamp flashes seven times (some systems may flash between six and nine times) and then stays off. Some warning lamps may also read "Inflatable Restraint" or "SRS air bag". If the AIR BAG warning lamp does not operate as described, perform the SIR DIAGNOSTIC SYSTEMS CHECK, or contact our office in Dallas, Texas at: (800) 205-0628. If the systems is working as described proceed through the installation steps of your airbag on / off switch.

**CAUTION:** One of the first steps in working on the airbag system is disconnecting the negative post on the battery. Mazda indicates to us that some vehicles are equipped with a radio theft device. Radio codes to reactivate the radio systems must be obtained before proceeding.

If your vehicle falls under these guidelines please read the next steps as we at Airbag Systems, Inc. will attempt to instruct you with this process.

Radio codes show to be obtained from the owner.

Turn ignition on. Push REW and FF buttons until radio displays bars.

Use channel preset button 1-4 to enter first digit of code.

Preset button 2 to enter second digit of code, etc. After entering all 4 digits of code, press and hold REW and FF for approximately 2 seconds until a beep is heard.

Radio will display code for approximately 5 seconds, then disappear to indicate radio is operative with anti-theft function by-passed. If radio displays ERR, repeat procedure.

### **DISABLING THE AIRBAG COMPUTER SYSTEM**

Turn the ignition off; disconnect the negative battery cable from the battery.

The airbag system contains a back-up power supply built into the airbag diagnostic monitor. Wait a minimum of ten minutes before servicing any component.

After the time has past the system is now disabled.

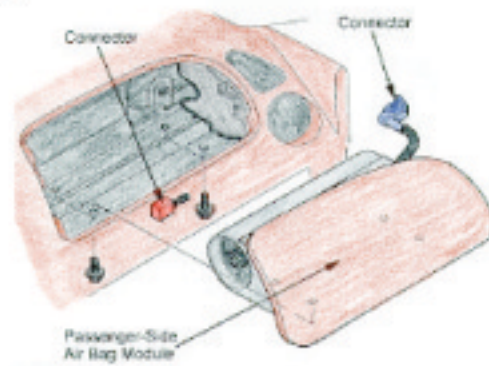
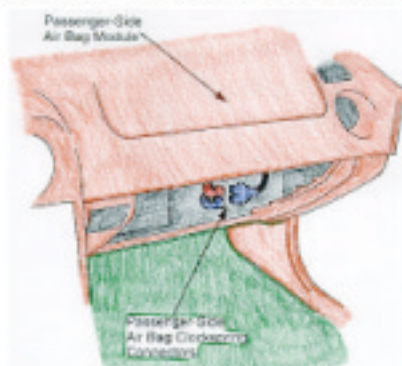
### **LOCATING THE COMPONENT**

The passenger side airbag connector is located at the right side of the dash panel and is access through the glove box.

Open glove box. Press the glove box sides inward. Lower the glove box to the floor.

Work through the glove box opening. (The orange connector is the vehicles horn.)

(The small blue connector is the airbag connector.)



The vehicles have shown us two types of wiring looms that are installed in the Mazda. So be sure to look at all pictures of these instructions to identify the proper wiring. Disconnect the small blue portion of the connector from the large blue portion of the connector. Locate the wire colors on the large connector red with black stripe and solid red are the colors indicated on the wiring diagram for the 1995-97 models. This is the side that you are going to work on. If possible hand trace the wiring back to the airbag itself. This is just to insure the proper airbag wiring.



- The orange connector is connected to the vehicles horn. It will need to be reconnected when finished.
- The small blue connector is the airbag. --Trace it back to the airbag itself to verify.
- Splice into the TWO wires of the airbag (blue) connector to install the on / off switch.  
Completely sever the wires.

Allow at least one inch of space when severing the wiring allowing room to attach airbag switch wiring.

## AIRBAG ON / OFF SWITCH INSTALLATION INSTRUCTIONS

**Important: Read and review all instructions and illustration sheets prior to kit installation.**

Vehicles include many variations of 'Airbag Systems' regarding component location and connector access. Included with these procedures are separate illustrations related to switch installations.

- Possible on / off Switch mounting locations
  - Possible mounting locations for Remote Display light.
  - Electrical wiring diagrams and schematics of connector procedures.
1. First step when working on an airbag system is to disable the vehicles system. To do this remove the negative battery cable from the vehicle. If the vehicle is equipped with a programmable radio or has a battery that is inaccessible. Remove the "Air bag" fuse from the fuse box. The "air bag fuse may also be identified as "SIR, "Fuse A11", "SDM" or "R#22". If two fuses for air bag circuits are found, remove both.

Fuse boxes are located under the left side of the instrument panel on most vehicles.

- As a check to indicate the system is disabled, when the air bag fuse is removed and the ignition switch in ON, the "AIR BAG" warning lamp should remain on. This is normal operation and does not indicate an S.I.R. malfunction.
- Discharge, remove the ignition key and remove or disconnect the components that are necessary for access to harnesses or part installation (sound insulator panels, glove boxes, windshield pillar garnish ("A" pillar) moldings, etc.

**Reminder:** The SIR system maintains voltage to deploy the air bag after the fuse has been removed. Each system (DERM or SDM) may maintain voltage for approximately 10 minutes. You must wait for the system to completely discharge before proceeding.

The airbag computer will store a fault code if you do not deactivate the system properly.

Do not touch any part of the airbag wiring until the standard 10 minutes has past OR YOU MAY GET A FAULT CODE in the vehicle when you are finished and have reconnected the system. The airbag computer will have the memory stored that the system was tampered with.

**IMPORTANT:** Switch display lights **MUST NOT BE MOUNTED** on panel surfaces where driver or passengers can come in direct contact if involved in an accident. Possible head or knee injuries can occur as a direct result if not mounted properly.

2. Most switches are requested to be located in the glove box. This is usually a good idea for both the install procedure and the vehicles owner. Our experience has been, no one wants to see the airbag on / off switch exposed. If all possible and would prefer to have the mounting out of sight. This is the reason for the airbag remote light. Our concern is that the operator of the motor vehicle will not know the correct position of the airbag switch if it does not have some kind of an indicator exposed to the driver or passenger. Some passenger side connectors are mounted on the left side near the steering column. This is a vehicle owner preference or is an issue where that vehicle did not have a glove box equipped in that vehicle.

3. The "display" light is to be located at the headline area, or rear view mirror. Remove the appropriate windshield pillar garnish ("A" pillar) moldings(s) for wiring harness routing.

4. Assemble and install the display light as the appropriate location and route the light harness to the switch harness location. When routed behind headliner or windshield moldings, tape the harness to the body surfaces to prevent rattles.

**IMPORTANT:** Some switch and display light installations may have excess harness length, and this excess harness length should be looped and tied or taped together. DO NOT CUT, SHORTEN OR LENGTHEN the switch harness. If excess harness is present, the excess harness length should be looped and tied or taped together.

5. Fasten the display light ground ring terminal to a good body ground.
6. Using a ¼ drill bit or hole saw, drill a harness routing hole on the glove box wall (top, back or side as needed). – Be careful to consider clearances and wire routing when opening and closing the glove box door and clearances behind other mounting areas. Make sure to install switch with enough room to install and turn the key by hand.
7. Review the switch mounting instruction sheets and using the bracket as a template and 5.0 mm (3/16") bit, drill the switch/harness mounting holes for box /compartment location. Pre-assemble the switch and bracket as required for mounting.
8. Route the switch wiring harness through the hole in the glove box, and install the switch in the appropriate location on the glove box using the bracket and fasteners provided.
9. Route the switch harness, and connect the switch harness air bag connectors in series with the air bag harness.
10. Fasten the display light feed wire connector to the switch harness connector.
11. In most cases, the recommended wire to splice into for the Pink display lamp power (from the switch) is the feed side of the turn signal flasher. Locate the turn signal flasher and remove from mounting bracket for access. Remove flasher and use test light to confirm the correct wire and that it is ignition fed by turning on/off several times.
  - Another method is to locate a wiring harness and remove enough protective wrapping to expose the wiring and be able to probe wires a test light. Locate an ignition fed wire in harness (typically Pink in color) by probing with test light and turning ignition on/off to verify ignition fed circuit.
12. Using the standard splice method splice using connectors or soldering.

Splice the switch harness feed wire (Pink) into the previously located feed source.

13. Reconnect the battery or fuses. Turn the ignition switch to the Run position, and test the switch light and performance.  
SELECT SWITCH POSITION BEFORE STARTING THE VEHICLE.
14. Operate the air bag switch from ON to OFF several times as a check of the display light circuit. The display light should be illuminated when the air bag switch is "OFF"
15. Verify that the AIR BAG warning lamp functions properly. Some systems may flash between six and nine times) and then stays off. Other systems remain on solid at first then shut off after about seven seconds. If the AIR BAG warning lamp does not operate as described, it indicates that something is wrong with the switch installation. Remove the fuse(s), check the harness connections and assure that the switch was not connected in reverse order.

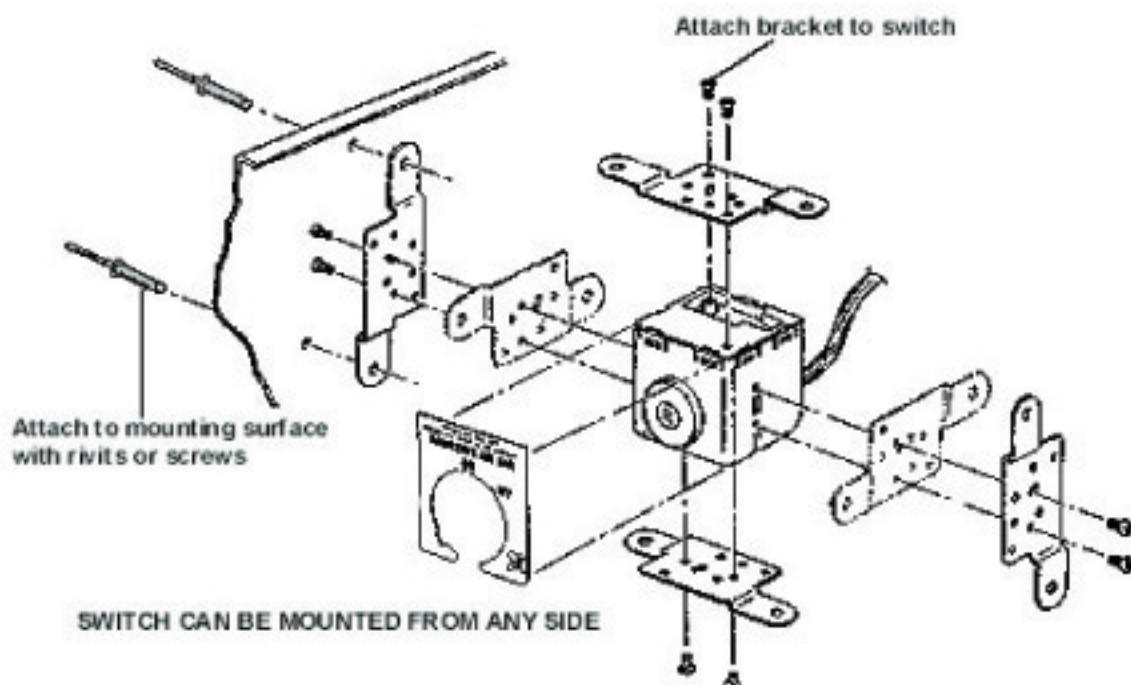
### ILLUSTRATION REFERENCES

#### FIGURE 1 – SWITCH AND BRACKET MOUNTING

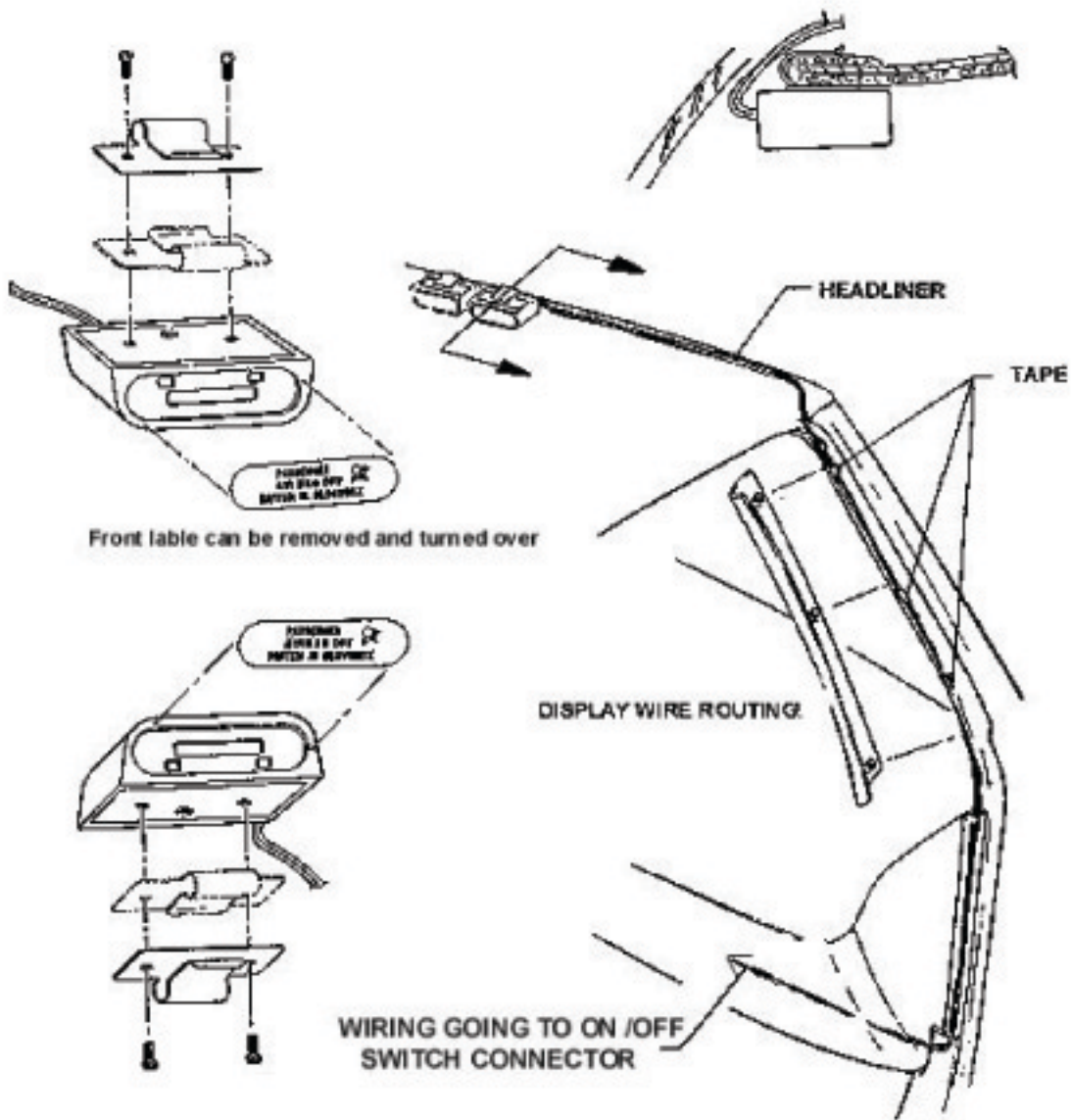
This shows the switch and bracket attachment possibilities.

- Right side mount with bracket in two positions
- Left side mount with bracket in two positions
- Top mount with bracket in one position

FIGURE 1:



**FIGURE 2 –DISPLAY LIGHT INSTALLATION**



**SUGGESTED MOUNTING LOCATIONS:**



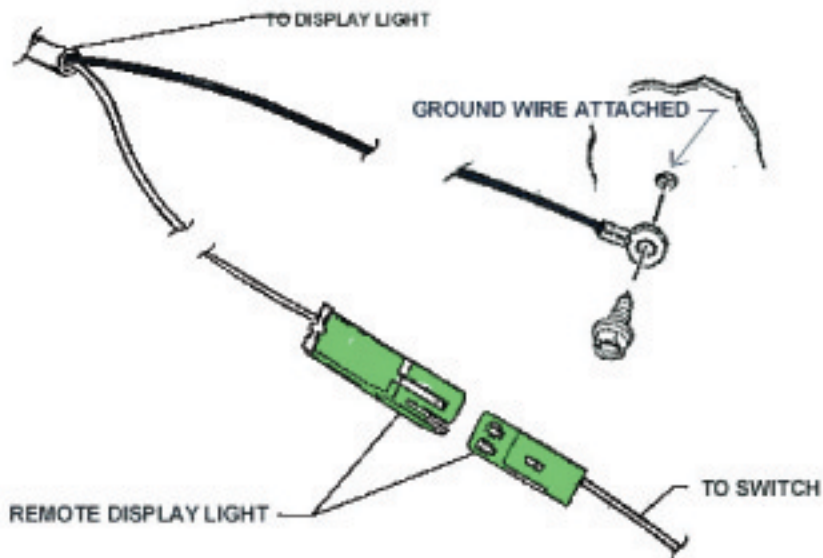
**FIGURE 3 – GLOVE BOX SWITCH MOUNTING**



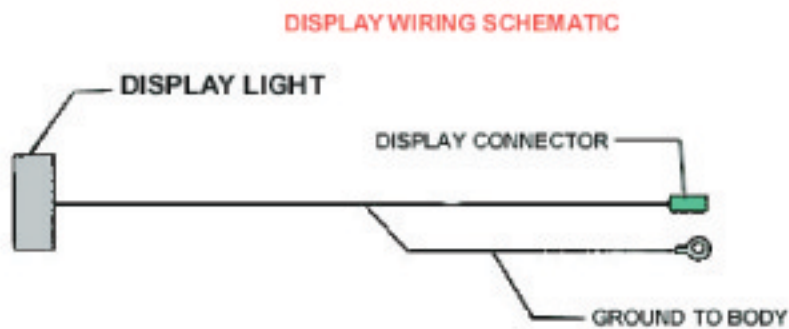
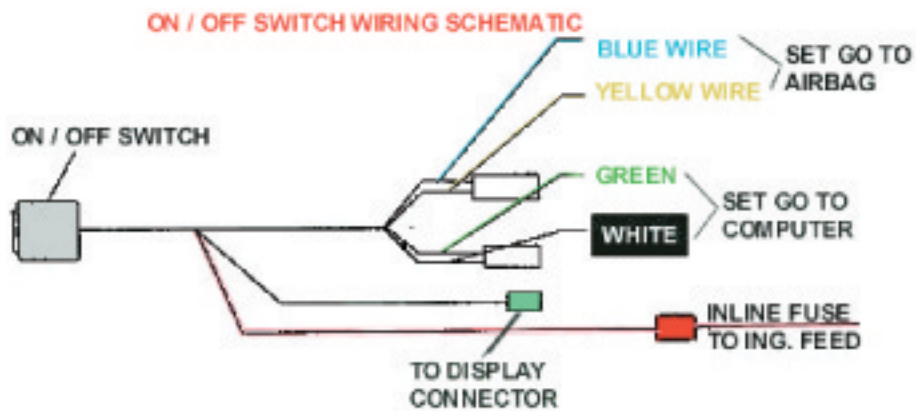
**FIGURE 4 – UNDER THE DASH SWITCH MOUNTING**



**FIGURE 5 – DISPLAY LIGHT WIRING CONNECTIONS**



**FIGURE 6 – WIRING SCHEMATICS FOR SWITCH AND DISPLAY**





Connect the airbag switch to the vehicles airbag-wiring loom by cutting the vehicles airbag wiring into and then attaching one side of the switch at a time as illustrated on the previous page.

The "Blue and Yellow" wires connect to the wiring that goes to the airbag in the vehicle. The "Green and White" wires go to the opposite side of the airbag wiring. Feeding current back to the vehicles on board computer system.

At this time you have connected the airbag on / off switch to the vehicle. Continue with connecting the airbag remote light and ground wire. Make sure to attach the ground wire to a clean source. Do not attach this ground wire to another existing ground on the vehicle. This may cause problems with other electrical sources.

Attach the Pink (HOT) wire to a ignition wire not a battery wire or the airbag light will remain on at all times.

By attaching the airbag on / off switch you are able to break the power cycle thus allowing the airbag to be disconnected when selected in the off position.

The drivers' airbag will remain completely active at all times unless you have installed an additional switch for that side as well.

To test the procedures turn the airbag switch to the **on** position before starting the vehicle. The airbag light will flash and then go off after about 7 flashes. This is to assure that the vehicles airbag system is working properly.

Then turn the vehicle off.

Turn the airbag switch to the **off position** and start the vehicle. The airbag light will flash and then remain off also.

The only indicator that the airbag is selected in the off position is the airbag switch remote light. That is the reason that the light must be visible by both occupants that are in the vehicle. This selection may be incorrect for the situation at hand and hopefully the proper position will be selected if both parties are able to observe the switch selection.

**Never select the airbag switch position while the vehicle is in the run position.**

**The driver of the vehicle is the responsible party to always check to see if the airbag(s) switch is selected to the proper position before starting the vehicle.**

After you have successfully completed the above steps. It is now necessary to place the WARNING LABEL on the upper side of the sun visor. This will need to be only on the side of the vehicle that the Airbag is equipped with an on / off switch.

If there is an original warning label on the sun visor that states the awareness of Airbag Danger. Place the label provided by Airbag Systems next to it.

**NOTICE:**

**YOU HAVE NOW INSTALLED THE AIRBAG SWITCH AT YOUR OWN DISCRETION. YOU ARE RESPONSIBLE TO NOTIFY ALL YOUR PERSONS OF THIS MOTOR VEHICLE AND TO THE NEXT OWNER THAT THIS VEHICLE IS EQUIPPED WITH AN ON / OFF SWITCH.**

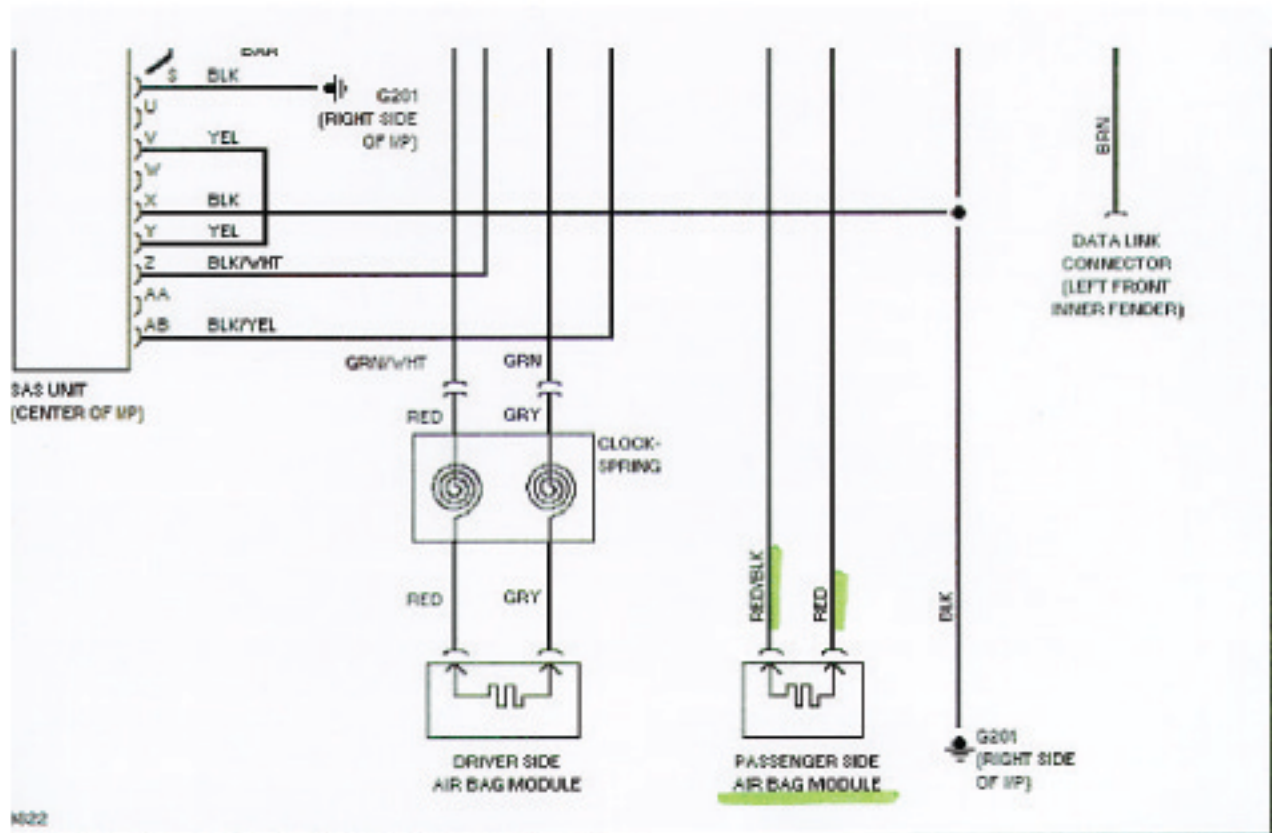
## ACTIVATING THE RADIO

- Turn ignition on. Press REW and FF buttons until radio displays bars. While radio is displaying bars, use channel preset buttons 1-4 to enter code number.
- Use preset button 1 to enter the first digit of the code, preset button 2 to enter second digit of code, etc. After entering all 4 digits of code, press and hold REW and FF buttons for approximately 2 seconds until a beep is heard.
- Radio will display CODE. This display will flash for 5 seconds, then disappear to indicate radio is operational with anti-theft activated. If radio displays ERR, repeat procedure.

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## COMPLEMENTARY WIRING DIAGRAM 1994-95 MIATA



Please take notice that our records indicate different wire colors from different assemble plants that the vehicles were built. If you have a concern about disconnecting after reading the above information. Please contact our Dallas Office At: **(972) 233-8828**.