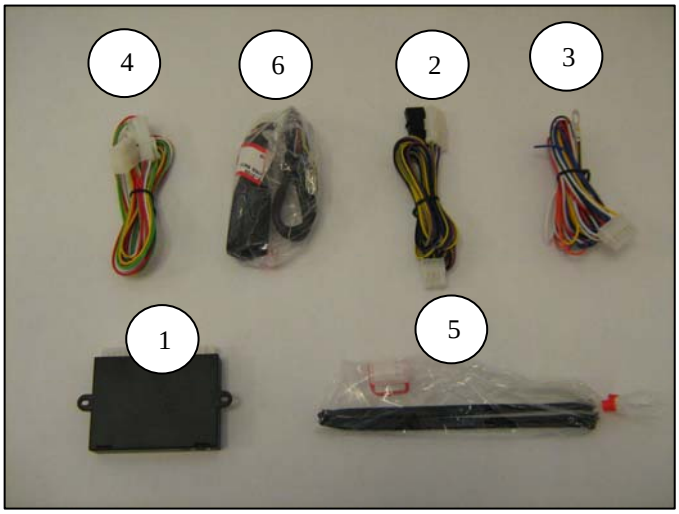
General Applicability

This cruise control was tested and verified on:
2008 - 2011 Nissan Frontier
2008 - 2011 Nissan Titan
This cruise control may not function correctly on unverified vehicles. See www.rostra.com for vehicle compatibility.

Kit Contents/Service Parts

Item #	Qty	Description	Service Part #
1	1	Cruise Control Module	250-2789
2	1	Switch Harness	250-2760
3	1	Main Wiring Harness	250-2759
4	1	Pedal Interface Harness	250-2771
5	1	Hardware Kit	250-2767
6	1	Control Switch	250-3742
7	1	Terminal Harness (Not Shown)	250-2774



Contents of Hardware Bag

Qty	Description
8	Wire Zip Ties

Recommended Tools

Safety Tools	
Safety Glasses	
Special Tools	
Volt-Ohm Meter	
Installation Tools	
Trim Removal Tool	
Drill Bit/Knockout Punch	9.5mm or 3/8” (for switch)
10mm wrench	
Soldering Tool	
Special Chemicals	

Conflicts

Note:

Legend

- **STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.
- **OPERATOR SAFETY:** Use caution to avoid risk of injury
- **CRITICAL PROCESS:** Proceed with caution to ensure a quality installation.
- **GENERAL PROCESS:** This highlights specific processes to ensure a quality installation.
- **TOOLS & EQUIPMENT:** This calls out the specific tools and equipment required for this process

WARNING: DO NOT USE HAND-HELD 2-WAY TRANSCEIVERS INSIDE YOUR VEHICLE WHILE DRIVING.

WHEN TRANSMITTING FROM INSIDE THE CAR, 2-WAY RADIOS THAT OPERATE IN THE 25MHZ-700MHZ FREQUENCY RANGE WITH MORE THAN 2.0 WATTS OF POWER CAN PRODUCE ELECTROMAGNETIC INTERFERENCE THAT COULD INTERFERE WITH THE OPERATION OF CRUISE AND THROTTLE CONTROLS RESULTING IN VEHICLE "LIMP MODE".

USE OF CELLULAR PHONES WILL NOT INTERFERE WITH THESE CONTROLS.

DUE TO SENSITIVE NATURE OF SIGNALS USED FOR THIS PRODUCT, ALL NON-PLUG AND PLAY CONNECTIONS MUST BE SOLDERED. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL VOID WARRANTY.

Section I – Installation Procedure

A. Pre-Installation Suggestions

1. It is advisable to disconnect the negative battery cable for 3 minutes before beginning installation, to avoid unintended air bag deployment. Note and record any anti-theft radio codes prior to disconnecting. **Figure 1**
2. Remove driver side lower dash panel, kick panel, steering wheel shroud, and instrument cluster panel. **Figure 2**

B. Install Electronic Module

1. Plug in the **Main Wiring Harness, Switch Harness, and Pedal Interface Harness** onto mating connectors of the **Cruise Control Module**. **Figure 3**
2. Place the **Cruise Control Module** in the secure location behind the driver side dash area near the firewall away from moving parts.
3. Route the **Pedal Interface Harness** through steering column and down to the accelerator**.**

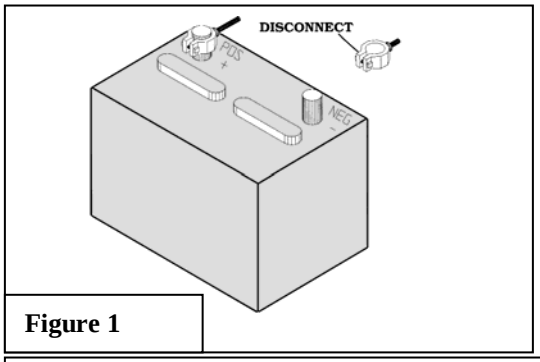


Figure 1


Figure 2

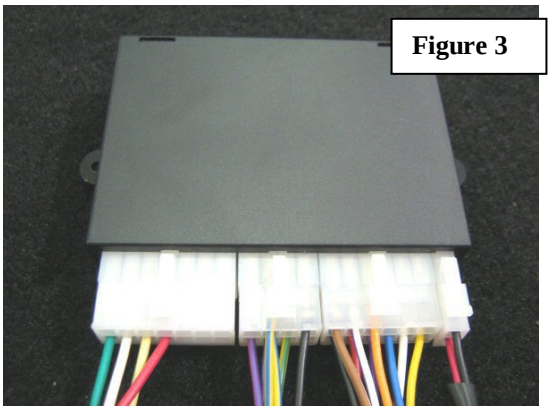


Figure 3

C. Install Pedal Interface Harness

1. Use the diagram and chart below to install the pedal interface harness. Disconnect the Pedal Interface Harness at the 2-pin connectors to ease installation of solder connections. Cut the selected wires at the accelerator harness leaving at least 2 inches of harness from the connector. Solder the wire ends from the pedal interface harness to the accelerator pedal harness according to each wire color listed in chart. **After soldering, wrap the exposed wires with electrical tape. Figure 4**.

WARNING: PROCEED WITH CAUTION TO BE SURE PEDAL INTERFACE HARNESS IS MATED PROPERLY TO THE ACCELERATOR HARNESS. FAILURE TO DO THIS CORRECTLY WILL DISABLE THE ACCELERATOR.

● : Solder Joint

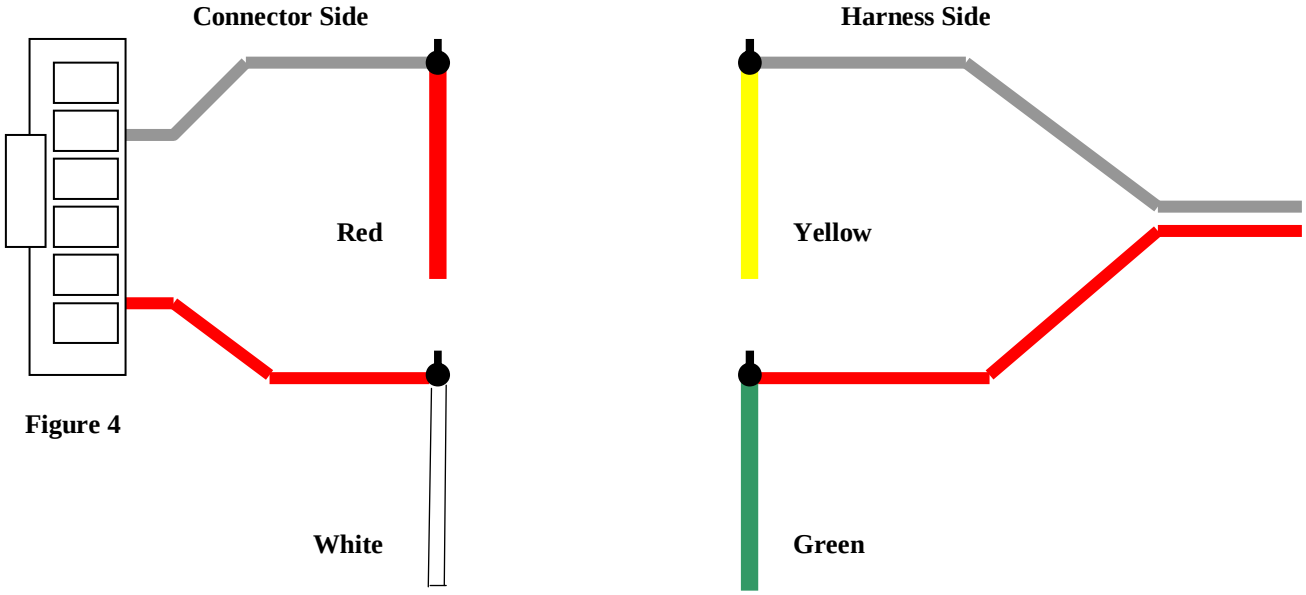


Figure 4

TITAN CONNECTIONS

Splice & Solder Direction	Cruise Harness Color	Vehicle Wire
CONNECTOR	RED	GREEN/RED
CONNECTOR	WHITE	BROWN/WHITE
HARNESS	YELLOW	GREEN/RED
HARNESS	GREEN	BROWN/WHITE

FRONTIER CONNECTIONS

Splice & Solder Direction	Cruise Harness Color	Vehicle Wire
CONNECTOR	RED	GRAY
CONNECTOR	WHITE	RED
HARNESS	YELLOW	GRAY
HARNESS	GREEN	RED

2. Check for good solder connection:
   Before continuing cruise installation, plug the 2-pin mating connectors in to each other as shown in **Figure 5**. Reconnect negative side of battery. Start engine and depress accelerator to confirm operation. Turn off engine and disconnect battery.

   a. If a DTC code appears, restart Section C and ensure proper wire matching and good solder connections.

3. Unplug the 2-pin mating connectors from each other (connected together in the last step) and reconnect to the 2-pin mating connectors of Pedal Interface Harness. **Use electrical tape to wrap all connections.**

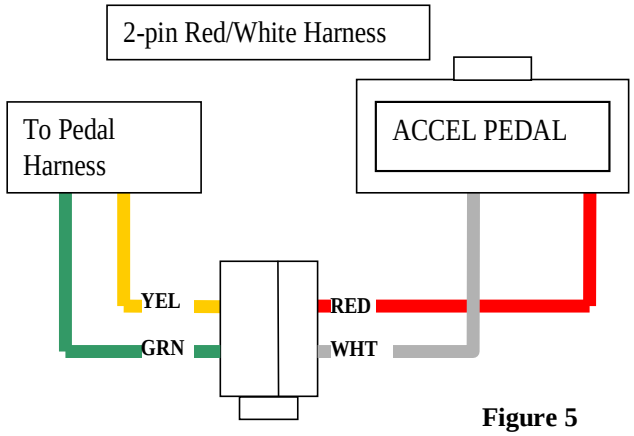
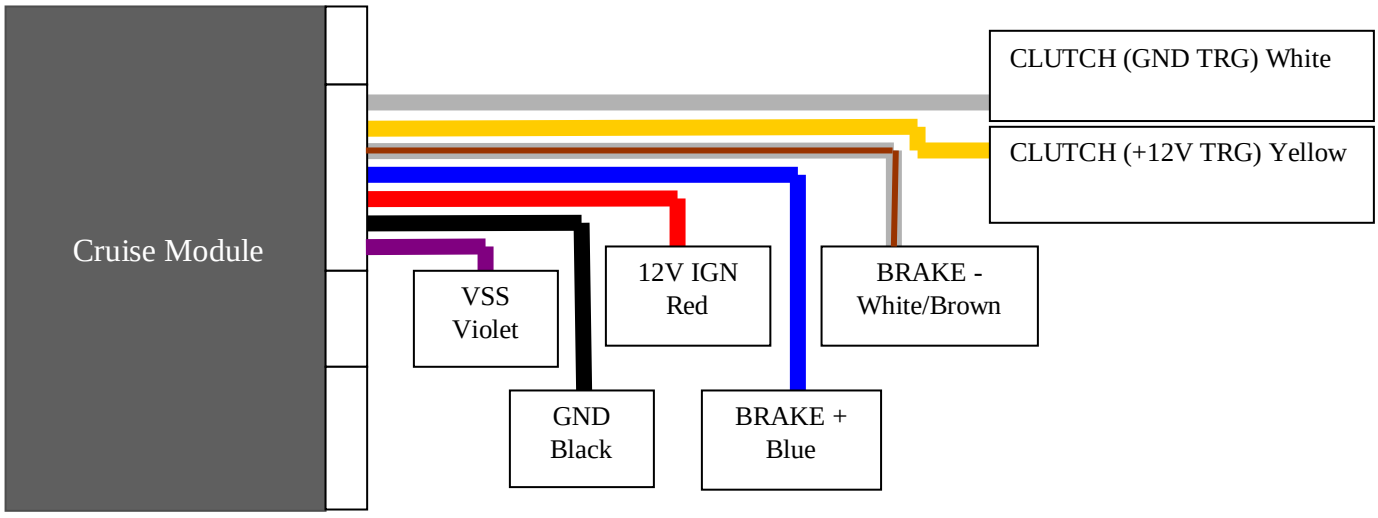


Figure 5

D. Wiring Connections (See Wiring Harness Description on last page)

1. Use the following wiring diagram as a reference to make the following connections if vehicle connections are not listed in the instructions:



E. Nissan Frontier Wiring Connections

1. Locate the following wires to connect to the main harness from the control module:

Function	See Fig.	Vehicle Color
IGN	1	WHITE/GREEN
BRAKE +	2	RED/BLACK
BRAKE -	2	YELLOW
GROUND	3	GROUND POINT
VSS	6	PIN 6 OR BLUE
CLUTCH		PAGE 4

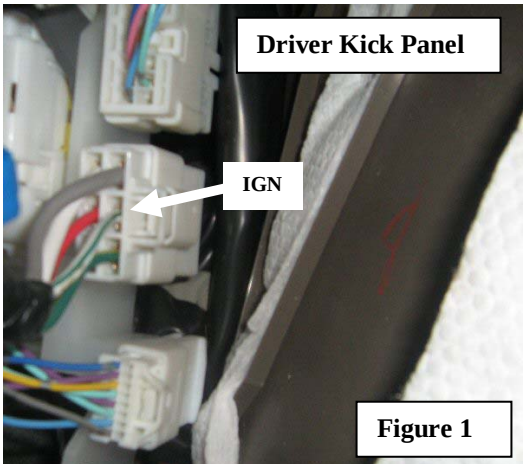


Figure 1

2. Connect the Main Harness to vehicle wire by using the chart below.

Function	Cruise Harness Color	Vehicle Wire
IGN	RED	WHITE/GREEN
BRAKE +	BLUE	RED/BLACK
BRAKE -	WHITE/BROWN	YELLOW
VSS	VIOLET	PIN 6 OR BLUE
CLUTCH	WHITE OR YELLOW	PAGE 4

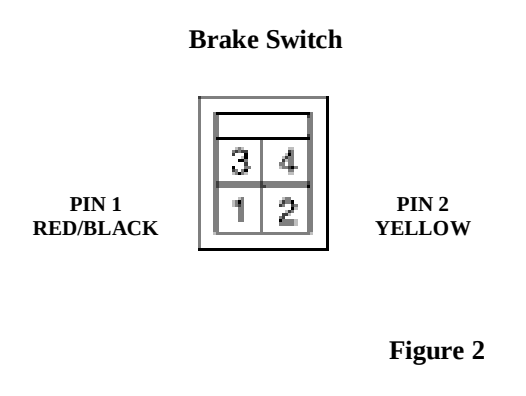


Figure 2

3. Apply the **Black Ground Wire** from the Main Harness to the Vehicle Ground Point at the lower dash panel frame. **Figure 3**

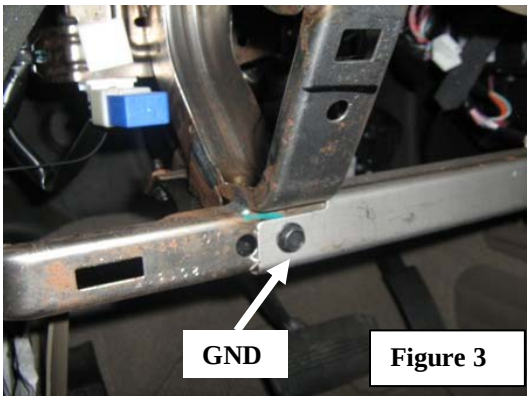


Figure 3

F. Nissan Titan Wiring Connections

1. Locate the following wires to connect to the main harness from the control module:

Function	See Fig.	Vehicle Color
IGN	1	WHITE/RED
BRAKE +	2	RED/YELLOW
BRAKE -	2	RED/BLACK
GROUND	3	GROUND POINT
VSS	7	PIN 29

2. Connect the Main Harness to vehicle wire by using the chart below:

Function	Cruise Harness Color	Vehicle Wire
IGN	RED	WHITE/RED
BRAKE +	BLUE	RED/YELLOW
BRAKE -	BROWN/WHITE	RED/BLACK
VSS	VIOLET	PIN 29

3. Apply the **Black Ground Wire** from the Main Harness to the Vehicle Ground Point at the lower dash panel frame. **Figure 3**

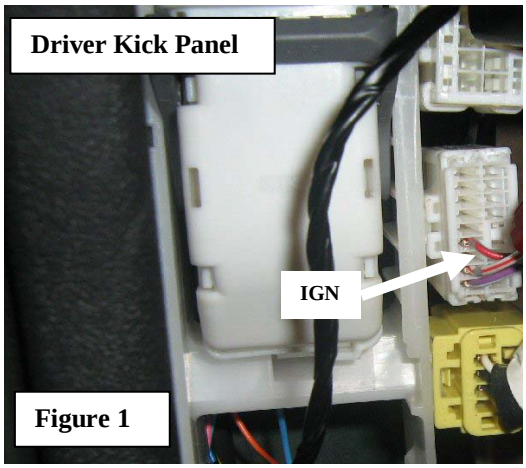


Figure 1

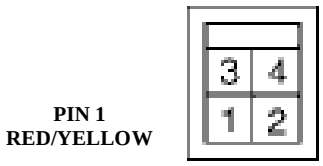


Figure 2

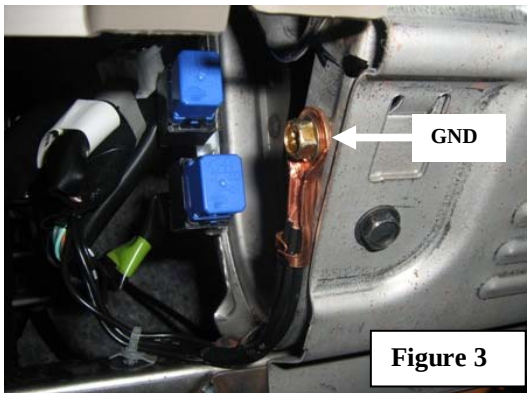


Figure 3

Nissan Frontier/Titan Connections Continued…

4. **Frontier VSS**: Locate the white 40-pin connecter at the instrument cluster. If **Blue Wire** is present in **pin 6**, connect the **Violet Wire** from the cruise harness to the Blue Wire in pin 6. If Blue Wire is not present in pin 6, **use a precision tool to release the retainer of the connector. Figures 4-5.** Locate the terminal harness supplied in kit**.** Insert the terminal end of the harness into **pin 6**. **Figure 6**.

   Titan VSS: Locate the white 40-pin connecter at the instrument cluster. If **Red/White Wire** is present in **pin 29**, connect the **Violet Wire** from the cruise harness to the Red/White Wire in pin 29. If Red/White Wire is not present in pin 29, **use a precision tool to release the retainer of the connector. Figures 4-5** Locate the terminal harness supplied in kit**.** Insert the terminal end of the harness into **pin 29**. **Figure 7 Make sure terminal locks into connector and replace retainer**

5. Connect the terminal harness to the Violet Wire of the cruise harness. Secure Cruise Control Module harnesses with zip ties away from moving parts

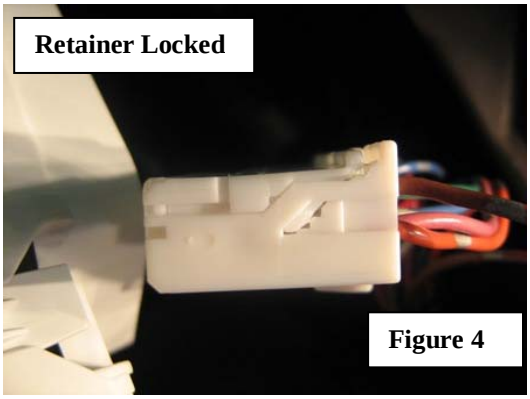


Figure 4

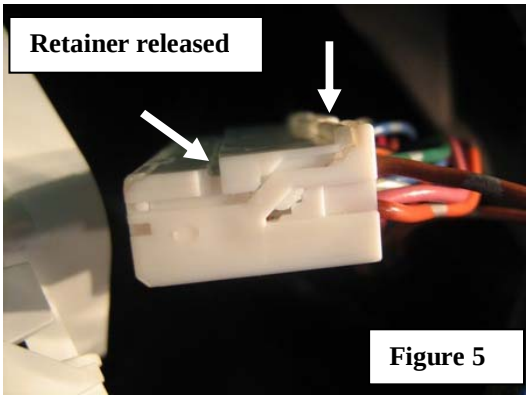


Figure 5

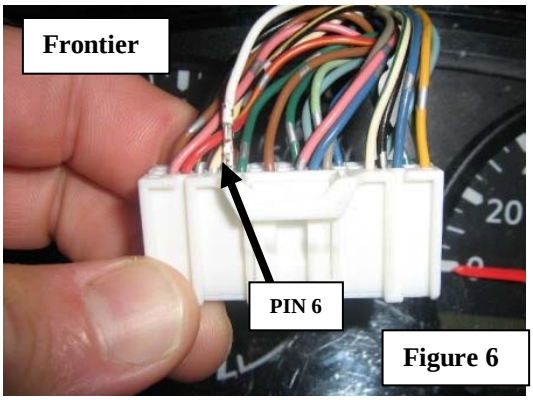


Figure 6

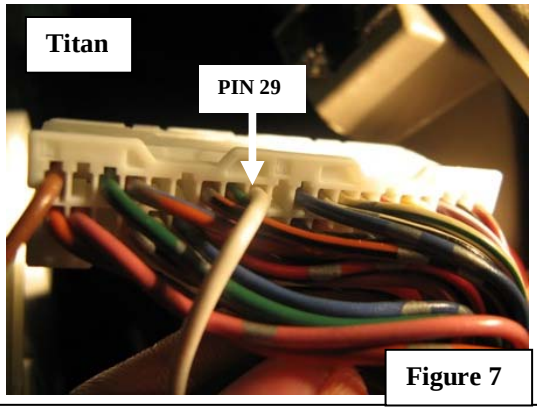


Figure 7

G. Install Control Switch

1. Use the **lever wedges** on the **Control Switch** at an angle template to drill a 3/8” or 9.5mm hole in the lower shroud of the steering column cover. Position lock-washers as shown. **Figure 1**
2. Apply nut and position **Control Switch** for driver’s best view.
3. Assemble (2) 3-pin connectors from the sack parts to the mating wire colors on the **Control Switch Harness**. Use the diagram to mate the module harness to switch harness. **Figure 2**
4. Route the assembled **Control Switch Harness** to the mating connector of the **Cruise Control Module**.
5. Secure the **Control Switch Harness** with zip ties away from moving parts.

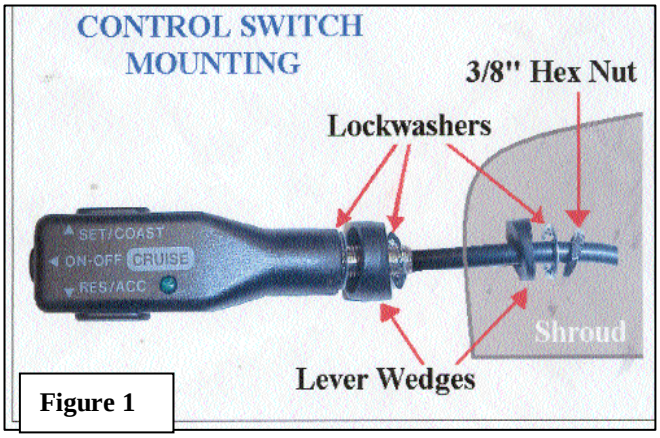


Figure 1

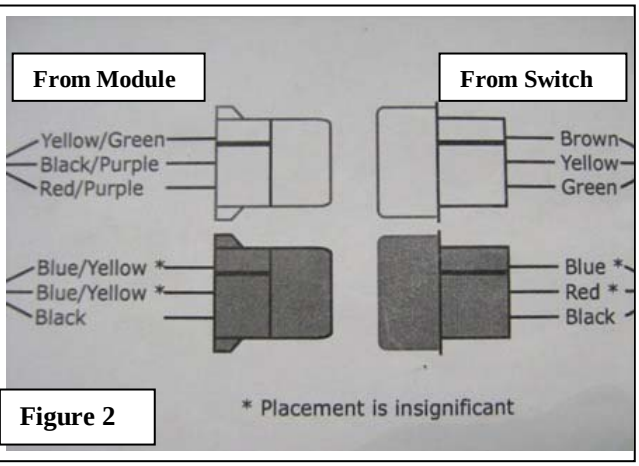


Figure 2


Figure 3

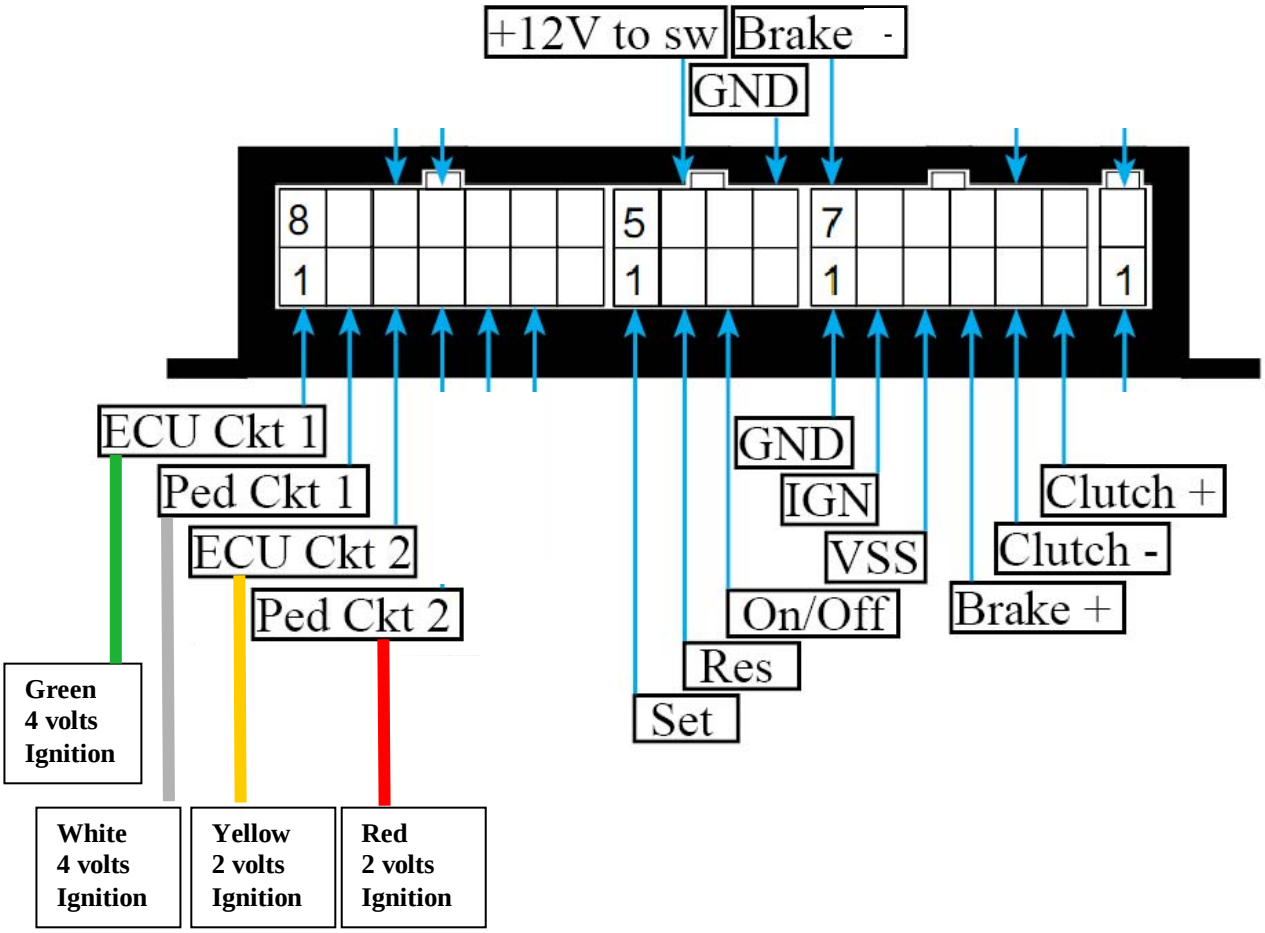
H. Testing

1. Reconnect negative battery cable and torque to 35 in*lbs. Reenter anti-theft radio codes.
2. Turn ignition on. Apply the on/off button of Cruise Control Switch.

I. Reassembly

1. Reinstall all removed pieces taking care to ensure harnesses and wiring connections are properly secured.
2. Make sure all harnesses are not pinched or bound by trim pieces.

Section II - Wiring Diagram

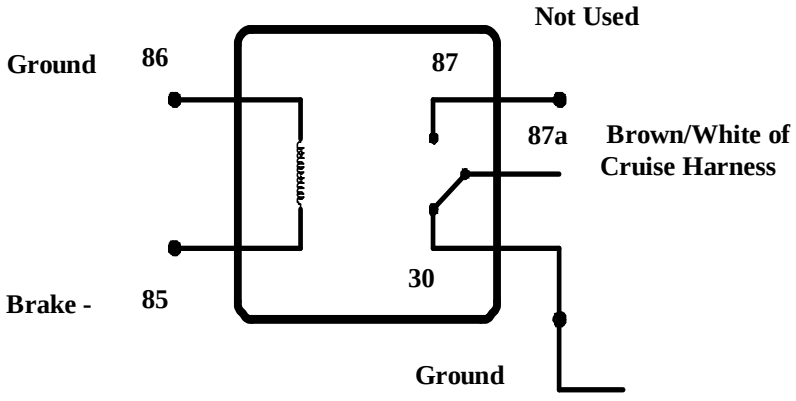


Note: All Pedal Interface Harness Voltages are with pedal fully depressed

TROUBLESHOOTING

Function	Color	Results	Fault Conditions
Ignition	Red	12 volts when switched on and zero (0) volts when switched off. Must not disappear when starting vehicle.	No power, voltage drop, or intermittent connection will cause Loss of pedal or "Limp Mode" condition.
Brake positive +	Blue	"Hot" side of brake switch. 12 volts all the time.	Cruise will not function if this connection is not installed correctly.
Brake negative -	Brown/White	"Cold side of Brake switch. Zero (0) resistance to ground when brake is not pressed. 12 volts when brake is pressed.	Cruise will not function if this connection is not installed correctly. If connection is good, and there is a high resistance to ground, a 5 terminal relay will be required to complete installation. See diagram below.
Ground	Black	Lowest resistance to ground closest to zero (0) ohms as possible. Use a vehicle ground point where other ground wires are connected to.	A bad ground connection will cause the following conditions: Cruise will not function; Loss of pedal or "Limp Mode" condition.
VSS	Violet	Vehicle speed sensor circuit	Cruise will not function if this connection is not installed correctly.
Clutch or NSS	White	12 volts active or ground active wire at switch when clutch is depressed or neutral safety switch is engaged.	Cruise will not function if wrong wire is connected. Cruise will not disengage when clutch is depressed or when switched to neutral if installed incorrectly.

5 Terminal Relay for Brake Switch



Notes:


Rostra
Precision
Controls, Inc.