

## **ILISC710-A Shift Interlock (Manual Lift Door) 2010-2011 Dodge Caravan Contact InterMotive for specific applications**

### **Introduction**

The ILISC710-A module represents the next generation of Lift Interlock and Input/Output capabilities from InterMotive Vehicle Controls. The ILISC710-A provides a number of benefits for the installer and user. 1/5 the size of its predecessor, easier, faster installation with fewer and unique connectors simplifying installation and ensuring proper connections.



### **Installation Instructions**

**Installation personnel must be able to remove/replace the center dash panel controls and associated trim, refer to the Dodge Service Manual or Dealer for assistance. If needed refer to the InterMotive website under product information.**

**Be sure the vehicle's battery is disconnected before proceeding with installation.**



**WARNING**  
Disconnect the battery to  
prevent setting a check engine  
light.

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

Remove the lower dash panel below the steering column area (**Fig.1**) and find a suitable location to mount the module so that the Diagnostic LED's can be viewed with the lower dash panel removed. Secure using 2-sided foam tape, screws or wire ties. Locate the module in an area away from any high heat sources. Do not actually mount the module until all wire harnesses are routed and secure (last step of the installation is to mount the module).



**Fig. 1**

### **LED Display Panel Mounting - Black 4-pin connector**

Suggested mounting area is as shown, the open storage box in the center dash panel (**Fig.2**). Remove the center assembly face-plate trim, to access the box from the back. Drill a 5/8" hole in the top (**Fig.3**) and feed the LED harness connector harness into the box and plug into the LED panel. Mount the panel using the supplied L-brackets and screws. Reassemble the dash panels and plug the other end of the harness (black 4-pin connector) into the module.



**Fig. 2**



**Fig. 3**

## Control Inputs/Outputs - 4-pin & 8-pin connectors

The ILISC710-A provides one ground side input and one 12V, 1/2 amp output. Refer to the ILISC710-A CAD drawing as reference when reading these instructions.

**For each blunt-cut connection strip insulation from the OEM wire to parallel tap blunt-cut to the wire with solder and tape.**

### 4-pin connector:

The (4) blunt-cut connections provide for control connections to the vehicle as follows:

**Red** – (12V Battery Voltage) Connect to a point that is battery voltage, HOT at all times. A recommended point of connection is the Lt. Blue- W/Red wire found in the same wire harness as the CAN twisted pair.

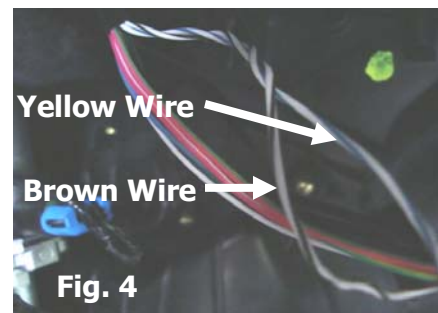
**Black**– (Ground) Connect to a ground source.

**Locate the CAN twisted pair wires** (Fig.4), harness is below steering column in the open area shown in (Fig.1) on page 1.

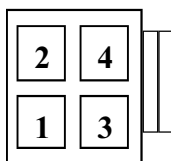
**Yellow** – Connect to the White w/Blue stripe as shown (parallel tap).

**Brown**– Connect to the White w/Purple stripe as shown (parallel tap).

CAN communication wires must be parallel tapped, using solder and heat shrink. A poor connection will result in network communication errors.



- Pin #1— RED (12V Battery Voltage)
- Pin #2 — YELLOW (HS CAN High)
- Pin #3 — BLACK (Ground)
- Pin #4 — BROWN (HS CAN Low)



**Connect the 4-pin connector to the module**



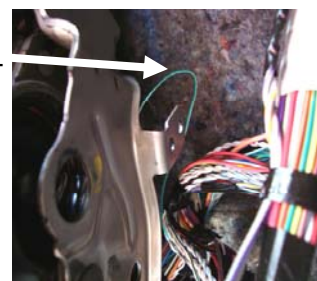
### 8-pin connector:

**Orange** – Lengthen this wire using solder and heat shrink or tape. This output is to be connected to the lift or lift relay. Refer to your particular lift model drawing when making this connection. This output provides 12V @ 1/2 amp when it is safe to operate the lift.

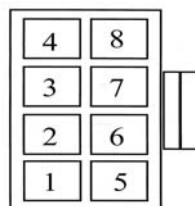
**Brown** – This **optional input** connects to the OEM Park Brake switch (as shown) such that a ground is made when the Park Brake is set. Strip back some insulation off the GR-W wire, solder the Brown wire on and tape or use heat shrink tubing. This connection is required if lift operation is desired when the vehicle ignition is OFF. The module must also be configured, (when using the Brown wire) as follows:

1. Connect the Brown wire first, fully open all doors and set the Park Brake.
2. Start the vehicle and then shut off.

The module has now been configured. To confirm watch the display panel as the key is turned OFF, if the display panel remains illuminated the configuration is complete. If the display goes out immediately, the configuration was not successful and will need to be done again.



- Pin #1 & #2 — N/C
- Pin #3 — ORANGE (Vehicle Secure (12V) Output)
- Pin #4 — N/C
- Pin #5 — BROWN (Park Brake (GND) Input) \*Optional
- Pins #6,#7 & #8 — N/C



**Connect the 8 pin connector to the module**



## Post Installation / Check List

### ILISC710-A (Manual Lift Door)

The following checks must be made after installation of the system, to ensure correct and safe operation of the lift. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections as per the installation instructions.

#### Reconnect the battery

Begin the checklist with the vehicle in the following state:

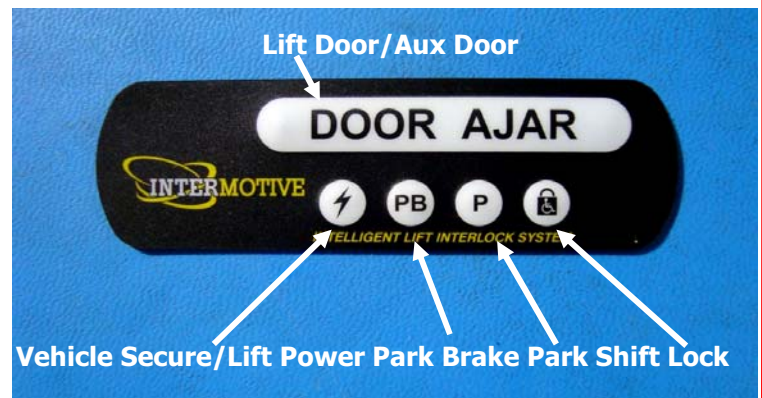
- Lift stowed
- Lift Door/Ramp closed
- Park Brake set (PB)
- Transmission in Park (P)
- Ignition off (Key off). Wait until the module goes into "Sleep" mode which takes approximately 40 seconds.



1. Turn ignition key on (to "Run"), verify the module wakes up and all 5 LEDs illuminate for approximately 2 seconds. The lower icon LEDs are backlit and should remain illuminated whenever the module is awake.
2. Verify that the Park LED, the Park Brake LED, and the Shift Lock LED remain illuminated.
3. Attempt to deploy the Lift/Ramp. The Lift/Ramp must not deploy with the Lift Door closed.
4. With key on, Lift Door open, Park Brake set and transmission in Park, all 5 LEDs will be illuminated. Attempt to deploy the Lift/Ramp. The Lift/Ramp should deploy. Stow the lift.
5. With key on, Lift Door open, transmission in Park, release Park Brake, verify that the Park Brake (PB) LED goes out, attempt to deploy the Lift/Ramp. The Lift/Ramp should not deploy.
6. With key on, Lift Door closed, Park Brake set, make sure transmission will not shift out of Park.
7. With key on, Lift Door open, Park Brake released, make sure transmission will not shift out of Park.
8. With key on, Lift Door closed, Park Brake released and the Service Brake applied, the transmission shift lever should be able to shift out of Park.

#### Optional LED Display Panel

1. Turn ignition on (to "Run"), verify the module wakes up and all LEDs illuminate for approximately 2 seconds.
2. Verify that the Park LED, Park Brake LED, and the Shift Lock LED remain illuminated.
3. Attempt to deploy the Lift/Ramp. The Lift/Ramp must not deploy with the Lift Door closed.
4. With key on, Lift Door open, Park Brake set and transmission in Park, all LEDs will be illuminated. Attempt to deploy the Lift/Ramp. The Lift/Ramp should deploy. Stow the lift.
5. With key on, Lift Door open, transmission in Park, release Park Brake, verify that the Park Brake LED goes out, attempt to deploy the Lift/Ramp. The Lift/Ramp should not deploy. Make sure the transmission will not shift out of Park.
6. With key on, Lift Door closed, Park Brake set, make sure the transmission will not shift out of Park.
7. With key on, Lift Door open, Park Brake released, make sure transmission will not shift out of Park.
8. With key on, Lift Door closed, Park Brake released and the service brake applied, the transmission shift lever should be able to shift out of Park.



When an additional door (Aux Door), is open, the Door Ajar LED will blink on the display panel until the door is closed. If the **Lift Door** is open, the Door Ajar LED will stay on steady, taking priority over the additional door input.

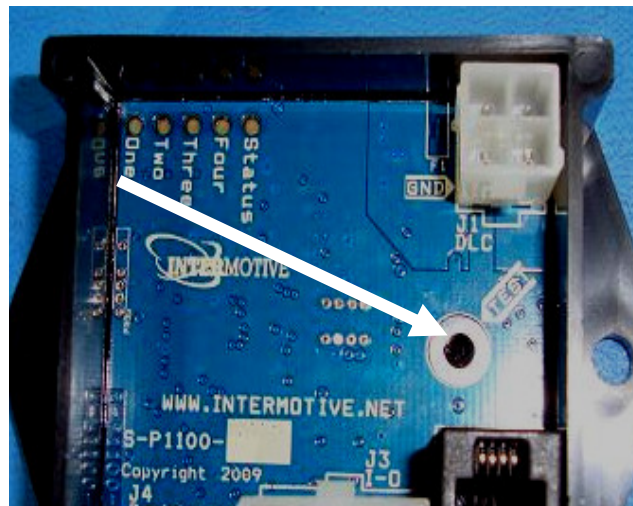
**Optional input:** If equipped with key off lift function, the Park Brake will need to be set for the system to be operational.

**If any of the previous Post Installation tests fail, enter diagnostic mode below.**

## **Lift Interlock Diagnostic Mode Testing**

Enabling Diagnostic Mode allows a visual indication of system status and is a good troubleshooting tool which may be used in conjunction with the above tests. The module is fully functional in this mode. Enter Diagnostic Mode by the following steps.

- Place transmission in Park and turn the ignition switch to the run position.
- Touch a grounded wire to the Test Pad (on the module) to go into Diagnostic Mode. LED's on the module will prove out, then become status indicators.
- LED 1 should be on when Shift Lock enabled.
- LED 2 should be on when transmission is in park.
- LED 3 should be on when Park Brake is set.
- LED 4 should be on when Lift Door is open.
- LED marked "status" indicates "Vehicle Secure" or "Lift/Ramp enabled" meaning there is 12V on Pin 3 (green wire) which connects to the Lift/Ramp.
- Cycling the key will exit Diagnostic Mode and all LED's will be off.



# Operating Instructions

## **ILISC710-A Shift Interlock (Manual Lift Door)**

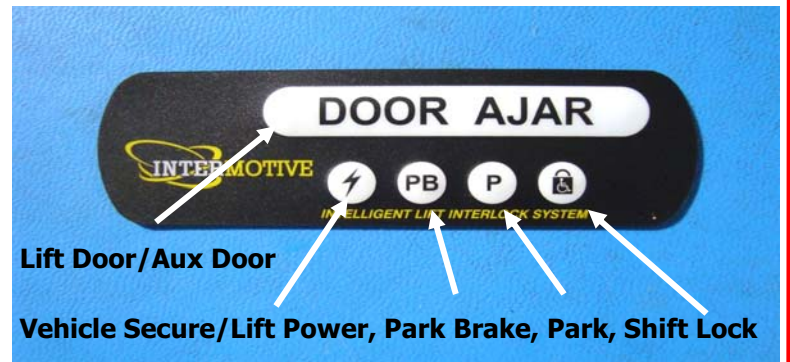
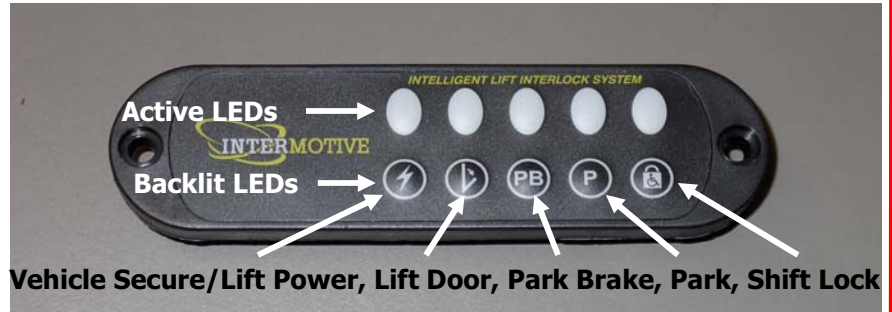
### **2010-2011 Dodge Caravan**

#### **ILISC710-A (Manual Lift Door)**

The ILISC710-A system is a microprocessor driven system for controlling wheelchair Lift/Ramp operation. The system can operate with the vehicle ignition on or off. Lift/Ramp operation will only be allowed as defined below in step 5.

#### **Key On function:**

1. When the vehicle is in "Park" the (P) LED will be illuminated.
2. When the Park Brake is applied, the (PB) LED will be illuminated.
3. When the Lift Door is open, the Lift Door LED will be illuminated. (Door Ajar LED on (optional display panel)).
4. When the Park Brake is applied or the Lift Door is open, the Shift Lock LED will be illuminated, and the shifter will not be allowed to shift out of Park.
5. With the vehicle in Park, Park Brake applied and Lift Door open, the Vehicle Secure LED will be illuminated and the Lift/Ramp will be operational. At this point **all** LEDs will be illuminated on either display panel.



#### **Key off function:**

Note: For this operation, vehicle must be equipped with a discrete input for Park Brake, if not, the module will not provide Vehicle Secure with the key off.

1. With the vehicle in Park, the (P) LED and Shift Lock LED will be illuminated.
2. With the Park Brake applied and the Lift Door open, all LEDs will be illuminated and the Lift/Ramp will be operational.

When an additional door (Aux Door), is open, the Door Ajar LED will blink on the display panel until this door is closed. If the Lift Door is open, the Door Ajar LED will be on solid, taking priority over the additional door input. If using the standard display panel, there will be no indication for the Aux. (auxiliary) Door.

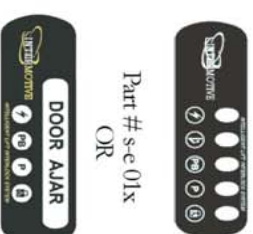
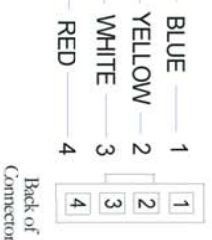
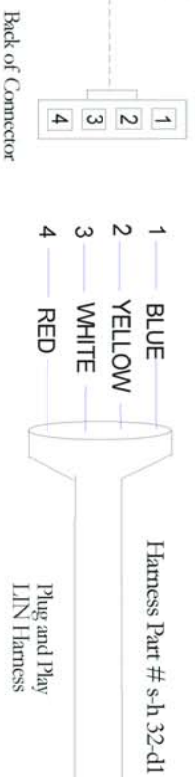
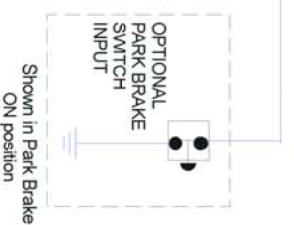
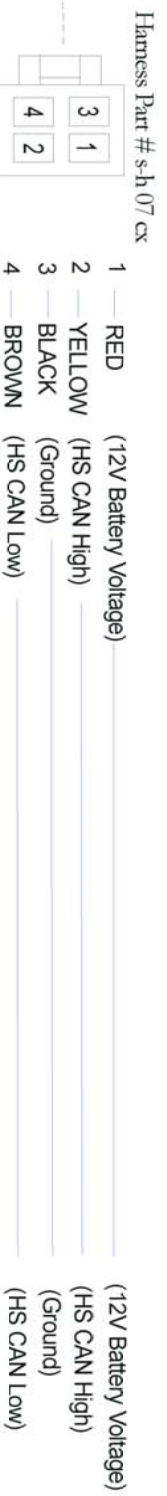
The ILISC710-A will not allow the vehicle to be shifted out of park if the lift door is open. As an added feature, it also will not allow the vehicle to be shifted out of park anytime the parking brake is applied. This feature eliminates excessive parking brake wear due to driving with the parking brake applied.

The ILISC710-A will operate with the vehicle ignition on or off (if optional Park Brake input supplied). When the lift door is closed and ignition power is not present for 5 minutes, the system will enter a low current "sleep" mode of operation. To wake from "sleep" mode, the ignition must be turned on (key on) or the lift door must be opened.

**Note:** If "keying on" when module is asleep, all display LEDs will illuminate for approximately 2 seconds as a "prove out". The backlit LEDs remain on as long as the module is awake.

#### **Important note:**

Do not leave the lift door open when the vehicle is not in use. This will cause a draw on the vehicle's electrical system and may result in a dead battery.



## Submit product registration at [www.intermotive.net](http://www.intermotive.net)

If the ILISC710-A fails any step in the Post Installation Test, review the installation instructions and check all connections.  
If necessary, call

**Intermotive Technical Support @ (530) 823-1048.**

ILISC710A-03-CAD