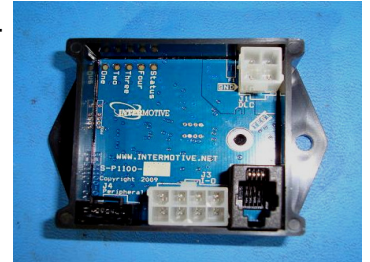


## **ILISC710-A Shift Interlock (Manual Lift Door) 2010 Dodge Caravan Contact InterMotive for specific applications**

### **Introduction**

The ILISC710-A interlock is a microprocessor driven system for controlling wheelchair lift operation. The system operates with the vehicle ignition on or off. 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.



### **ILISC710 Add-On Option**

ILISC710-AD with Door Ajar: Monitors an additional door other than lift door.

### **IMPORTANT—READ BEFORE INSTALLATION**

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. Avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Avoid radio frequency energy from antennas or inverters next to the module. Avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

### **Installation Instructions**

**Disconnect the vehicle's battery before proceeding with installation.**



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

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.

### **ILISC710 Module**

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 the open storage box in the center dash panel (**Fig.2**).

1. Remove the center assembly face-plate trim to access the box from the back.
2. 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.
3. Mount the panel using the supplied L-brackets and screws.
4. 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.

**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). The 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).

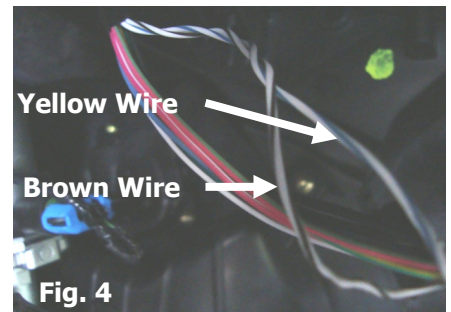
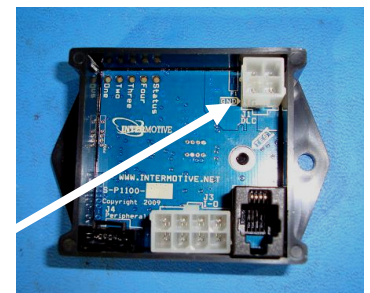
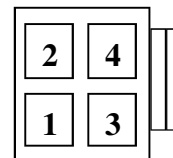


Fig. 4

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**

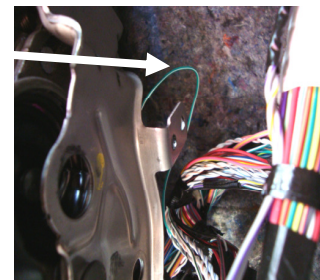


## Control Inputs/Outputs - 4-pin & 8-pin connectors (continued)

### 8-pin connector:

**Orange** – Lengthen this wire using solder and heat shrink or tape. Connect this output to the lift or lift relay. Refer to the 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.

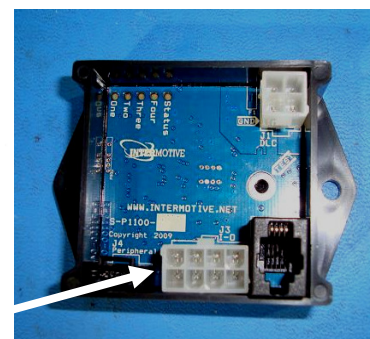
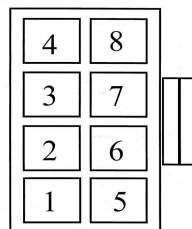


When using the Brown wire, the module must be configured as follows:

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, as the key is turned OFF, the display panel will remain illuminated and 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

### ILISC710-A Module Mounting

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the ILISC710-A module as described on page one. Secure using screws or doubled sided tape.

## Reconnect vehicle battery

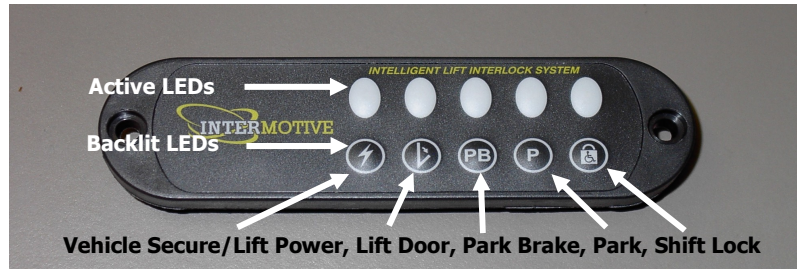
## Post Installation / Check List

### 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.

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.



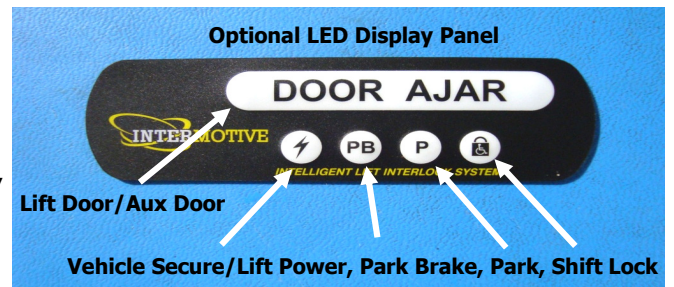
1. Turn ignition key on (to "Run"), verify the module wakes up and all 5 LEDs illuminate for approximately 2 seconds. The lower icon LEDs are backlit and will remain illuminated whenever the module is awake.
2. Verify that the Park LED, the Park Brake LED, and the Shift Lock LED remain illuminated.
3. 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. Verify the Lift/Ramp deploys. 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. Verify the Lift/Ramp does not deploy.
6. With key on, Lift Door closed, Park Brake set, verify transmission will not shift out of Park.
7. With key on, Lift Door open, Park Brake released, verify transmission will not shift out of Park.
8. With key on, Lift Door closed, Park Brake released and the Service Brake applied, verify the transmission shift lever will to shift out of Park and all LED's are OFF.

### Optional Door Ajar LED Display Panel

Perform the same checks as above.

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 must be set for the system to be operational.



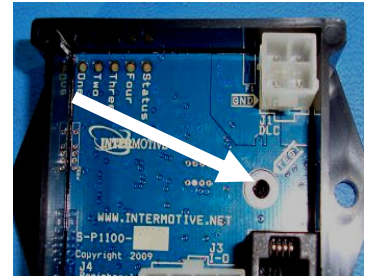


**If any of the previous Post Installation tests fail, enter diagnostic mode below.**

### **Lift Interlock Diagnostic Mode Testing**

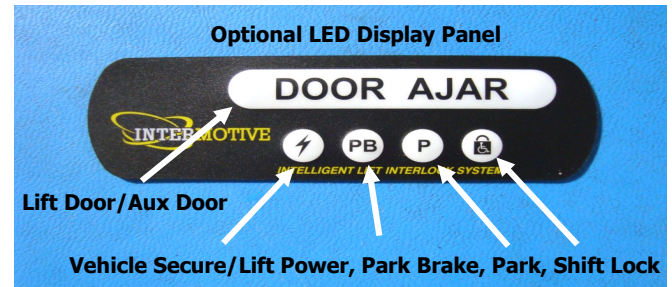
Enabling Diagnostic Mode allows a visual indication of system status and can be used as a troubleshooting tool in conjunction with the previous tests. The module is fully functional in this mode. Enter Diagnostic Mode by the following steps:

1. Place transmission in Park and turn the ignition switch to the run position.
  2. Touch a grounded wire to the Test Pad on the module. LED's on the module will prove out, then become status indicators:
- LED 1 will be on when Shift Lock enabled.
  - LED 2 will be on when transmission is in park.
  - LED 3 will be on when Park Brake is set.
  - LED 4 will 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.



## LEAVE IN VEHICLE ILISC710-A Shift Interlock (Manual Lift Door) Operating Instructions 2010 Dodge Caravan

The ILISC710-A is a microprocessor driven system for controlling wheelchair lift operation. The system will operate with the vehicle ignition on or off (if optional Park Brake input supplied). Lift operation will be enabled when specific vehicle safety conditions are met and will lock the transmission shifter in Park when the wheelchair lift is in use. The ILISC710-A prevents the vehicle from being shifted out of park if the lift door is open. As an added feature, the vehicle cannot be shifted out of park anytime the parking brake is applied. This eliminates excessive parking brake wear due to driving with the parking brake applied.



### Key On function:

- When the vehicle is in "Park" the (P) LED will be illuminated.
- When the Park Brake is applied, the (PB) LED will be illuminated.
- When the Lift Door is open, the Lift Door LED will be illuminated. (Door Ajar LED on (optional display panel)).
- 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.
- 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. All LEDs will be illuminated on either display panel.

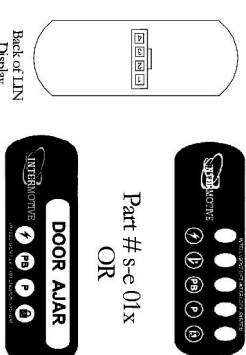
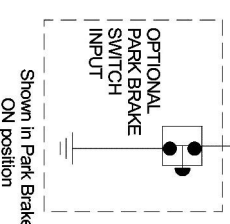
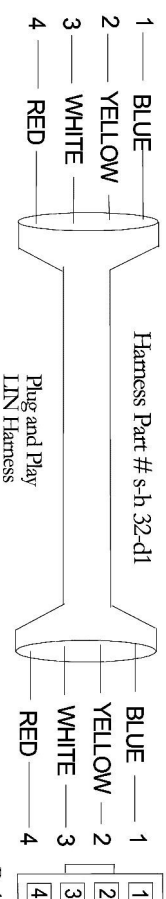
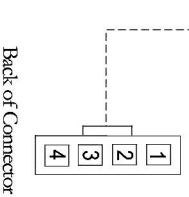
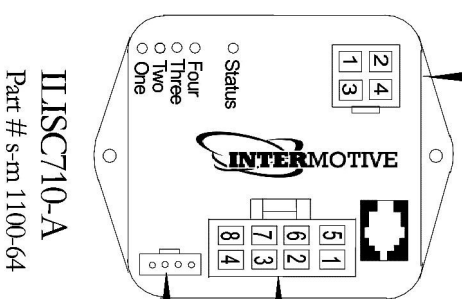
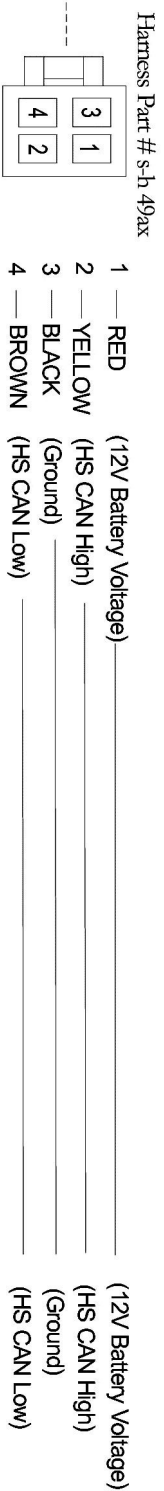
### Key off function: (if optional Park Brake input supplied)

- Vehicle must be in Park before turning key off
- With the vehicle in Park, the (P) LED and Shift Lock LED will be illuminated.
- With the Park Brake applied and the Lift Door open, all LEDs will be illuminated and the Lift/Ramp will be operational.

**Optional Door Ajar:** If equipped, 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.

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. 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.

**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.**



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 at (530) 823-1048.