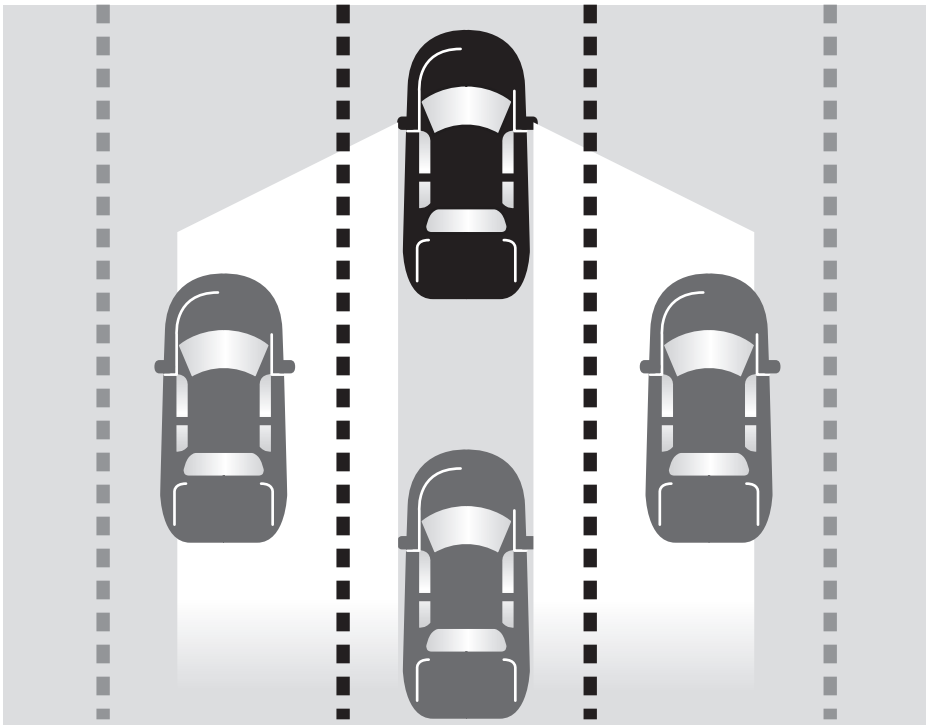
BLIND SPOT DETECTION SYSTEM

INSTALLATION INSTRUCTIONS



Parts Included

Main BSDS module

Connector cables

Mirror assembly with camera

- Main BSDS module
- Mirror assembly with camera
- Connector cables
  - Left/Right camera cables with RCA connectors
  - Camera power cables
  - LED warning signal

Tools Needed

- Hook tool
- 10mm socket wrench and extension
- Panel popper tool
- Test light
- Pliers

Before Starting: CAUTION!! DISCONNECT CAR BATTERY BEFORE INSTALLATION FOR SAFETY

Removing Existing Mirror

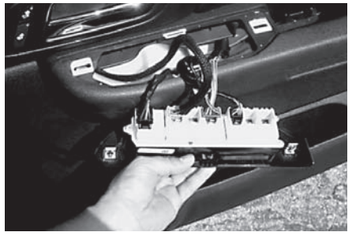
1. Pry the screw cap off with the popper tool to expose mounting fasteners.

2. Remove door grab mounting fasteners.

3. If you have power windows, use the hook tool to remove the retaining clip and remove the lock assembly. If you have manual windows, remove the window crank.

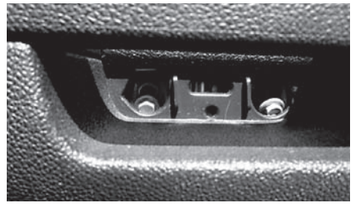
4. Carefully pry the switch plate up and off with the panel popper tool.

5. Disconnect all electrical connectors and remove the door grab handle assembly.



6. Pry off the screw cover cap and remove the retaining screws from the door trim panel.

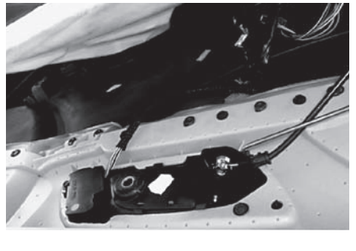
7. There will be mounting screws inside to release the door panel. Use a ratchet wrench to remove the screws.



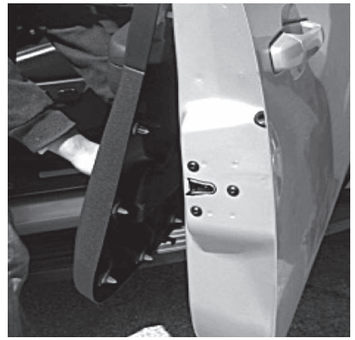
8. Take off the interior trim cover near the mirror to expose the outside mirror mounting fasteners.

9. Pry off the trim from around the bottom and side of the door and pull it out.

10. Detach the door lever release cable at the bottom of the assembly to free the door panel completely.

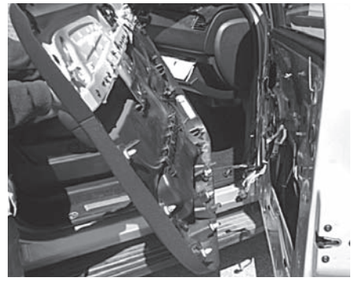


11. Pull the door panel from the bottom to release from the clips that go around the edge of the door.



12. Lift the door panel up and out to take off completely.

13. Disconnect all electrical plugs.



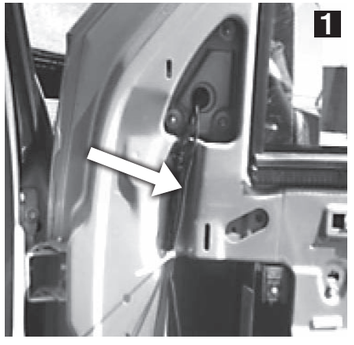
14. Follow the wiring to the electrical connector and disconnect. Remove mounting nuts from behind the mirror assembly and take off mirror.

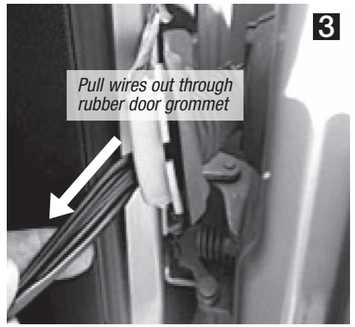
This completes the removal of your existing factory mirror. You will be reversing this process when installing your new BSDS Mirror.

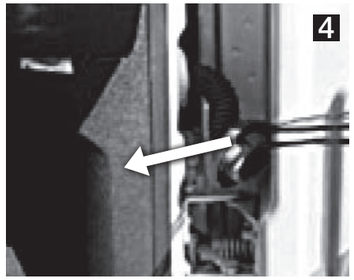
Installing Your BSDS Mirrror

1. Fit the new mirror onto the door. Run your wires along the factory holes.

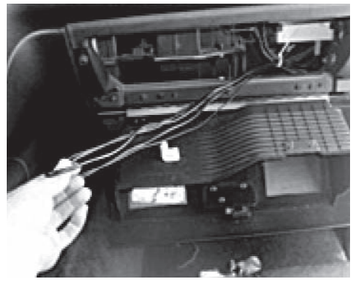
2. Route wires through the inside door panels and out through the door grommet to get into the vehicle cab.







3. Run wires through the kick panel and dashboard to the center console area by the radio. You will need to install the main BSDS unit under the cover of the center console.

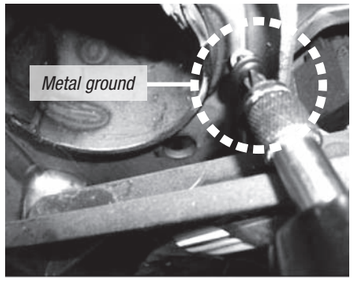


4. After mounting the BSDS module inside the center console, you will need to hardwire it to your vehicle's power source.

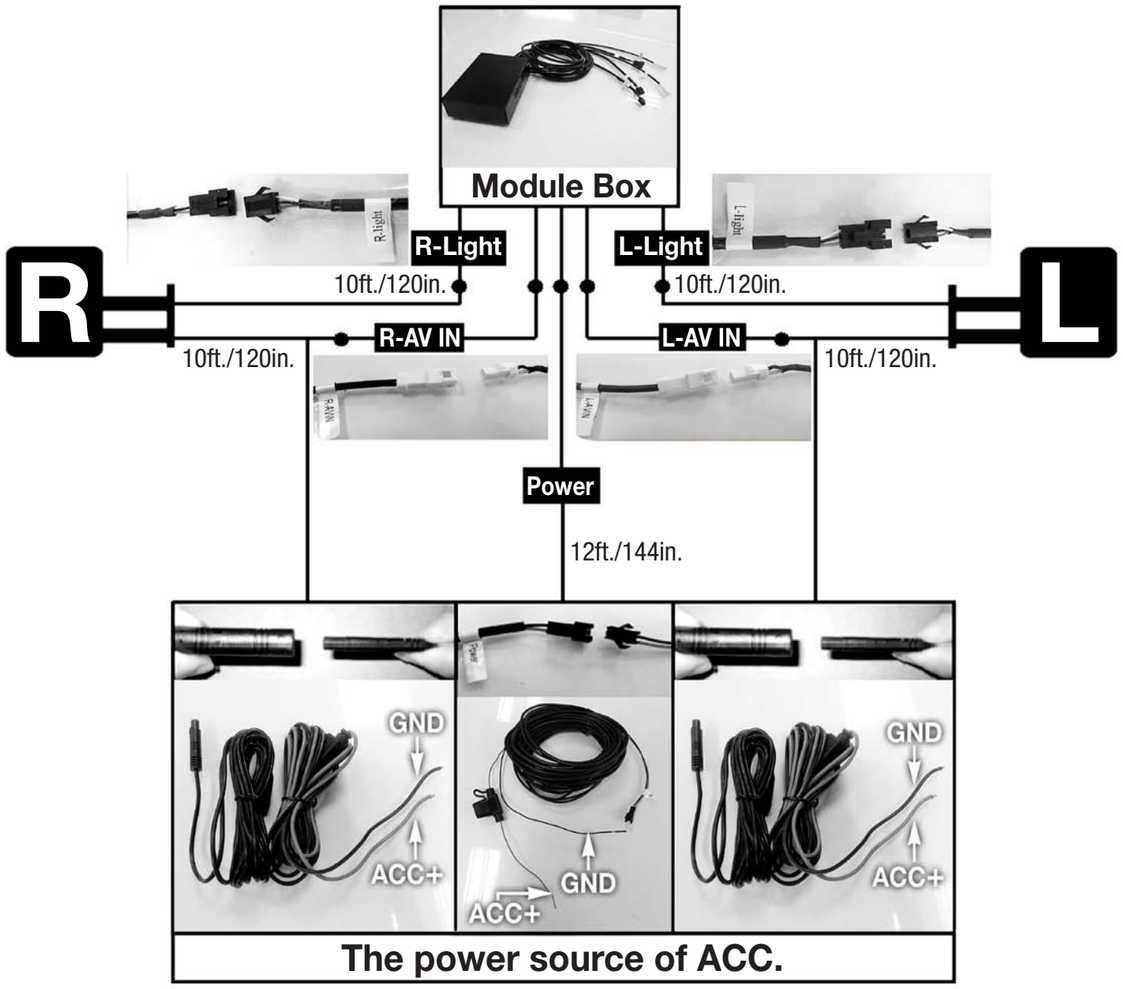
5. Use a test light to find the ACC fuse.

6. From your unit, string the RED power wire and BLACK ground wire all the way to your vehicle's fuse box, located by the driver's side of the dashboard. Connect RED lead to the ACC fuse and the BLACK lead ground to the car's metal frame. We recommend using a fuse adapter to connect the wire.

Both power / ground to this location.



7. Connect all wire leads from the unit to wire leads from each BSDS mirror. There are 3 sets of wires each from the left and right mirrors. Be sure wires are not crossed.



Note: Connect red cable with fuse to ACC+, connect black cable to GND

This completes the installation of your new Blind Spot Detection System. Reinstall your door paneling and trim, reconnect your car battery, and you are done.

LANE CHANGE ALERT-CAM

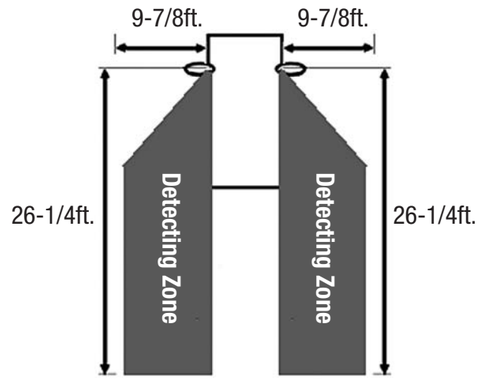
BLIND SPOT DETECTION SYSTEM OPERATION

Function Description:

- Main function: Notify the drivers of approaching objects
- Sensor: Camera
- Warning: Activates when objects (Cars, motorcycles or passers-by) come into the blind spot detection zone.
- Warning signal: LED lights up whenever objects enter the detection area. If driver attempts a lane change by switching on turn signal, a buzzer will sound.
- Effectiveness: Camera visibility must be at least 10m. Under these conditions, system accuracy is over 90%.
- Warning is still active when vehicle is parked. Door should not be opened if LED light is on — warning indicates an object approaching the vehicle in the blind spot.

Specification:

- Power source: 9~24V
- Video system: NTSC
- Video resolution: 640*480
- Camera View Angle: about 60°~ 90° (55°~ 85° horizontal, 50°~ 80° vertical)
- Storage Temp: -22°F to 185°F
- Operation Temp: -4°F to 158°F
- Warning system: LED light*2; Buzzer*1
- Detection zone: 9-7/8ft. out from both sides of vehicle; 26-1/4ft. back from outside rearview mirrors.



Caution:

- This system is only an assistant, and not meant to replace your outside rearview mirrors. The system has limitations in certain circumstances (see below).

Operation Description:

- Activating the system: ACC on
- Detection zone: 9-7/8ft. out from both sides of vehicle; 26-1/4ft. back from outside rearview mirrors.
- Warning sequence:

  Driver has not signaled for a turn-
  LED lamp illuminates when a moving object enters the system's detection zone, warning the driver before he changes lanes.

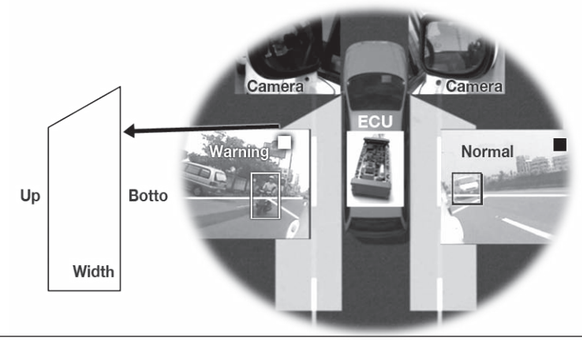
  Driver has already signaled for a turn-
  Both LED lamp illuminates and warning voice activates if an object is in the detection zone, warning the driver.

- If moving objects enter the detection zone on both sides of the vehicle, LED lamp illuminates on both mirrors.
- De-activating the system: ACC off

Special circumstances that may affect system accuracy:

- *This system may not function well in snowy weather.*
- *If the speed difference between your vehicle and parallel traffic is less than 2 mph.*
- *When your vehicle's speed is slower than 12 mph.*
- *Approaching objects are too far away from the detection zone.*
- *Harsh sunset or bright lights at night shine directly on the video lens.*
- *This system may not function well in dark tunnels or if the vehicle coming from behind does not have its headlights on.*
- *When entering or exiting the tunnel, the video camera may not adjust immediately to the change in ambient light.*
- *Shadowy climate conditions, certain vehicle colors that blend into the background, or driving into harsh shade during the day may affect the camera performance.*
- *The system may momentarily turn off when your vehicle passes an extra long vehicle during nighttime.*
- *When wheels of oncoming cars are black or dark colored.*
- *When the glare of high beams or xenon lamps shine directly on the camera lens.*
- *If approaching objects are extremely small such as bicycles, scooters or pedestrians.*
- *The system shuts down when ACC is off due to no power.*
- *Bad climate conditions, such as snow, rain, fog, dust, insufficient light or glare directly hitting camera lens may affect system performance.*
- *When the car is making a wide turn.*
- *The system may pick up reflections from the road surface such as trees, parked cars, etc.*
- *When approaching cars in neighboring lanes is extremely slow or they pass by extremely fast.*
- *Vehicles that do not have headlights on at night will not be detected, as well as trailers without lights that are being towed.*

BLIND SPOT DETECTION SYSTEM SPECIFICATION

Item	Specification
Power	•Operating Voltage: 9~16V (ACC IN) •Consumption current: 0A (ACC OFF) 360mA~420mA (turn on, stand by)(without camera) 410mA~550mA (turn on, the system works, LED and beeper works) (without camera)
DSP	•Speed of DSP: 800MHz •Image calcuated speed: 15fps
Effective area (both right & left sides)	Up: 17ft., Bottom: 26-1/4ft., Width: 9-7/8ft. (With camera installed on the door mirror, height of camera is about 39in.) 
Input	Turn signal for both Left and Right hand sides
Output	LED and Beeper

Item	Specification	
Image input	NTSC or PAL camera	
Warning activation	When object is in effective area (both left and right side) during driving.	
Warning signals	•LED flashes to warn the driver that the object is approaching. •When object approaches and turn signal is activated, the system beeps to warn the driver.	
LED	•Red LED, Flash frequency: 1Hz •Angel: 110°	•Brightness: 450mcd •Consumption current: 50mA (Max)
Beeper	•Normal voltage: 11Vdc •Operating Voltage: 6~13Vdc	•Consumption current: 10mA (Max) •Output frequency: 1.1Hz
Camera	•Image Sensor: 1/4" Color CCIQ II •Video system: NTSC •Pixels: 648×488 •Resolution: 320 ± 10 TV Lines •Minimum Illuminator: 1Lux •Image Transfer Rate: 30fps	•Video Output: 1Vp-p, 75Ω •Power Supply: 9~16V •Power Current: 30mA •Dimensions (W×H×L): 18.5×18.5×27mm •Water Proof: IP67

Safe Driving!

PRECAUCION: FRAGIL. MANEJESE CON CUIDADO.
MANTENGASE FUERA DEL ALCANCE DE LOS NIÑOS.