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CVRPS14WI

**Sensor System with Graphic
Overlay**

Installation & Operation Manual

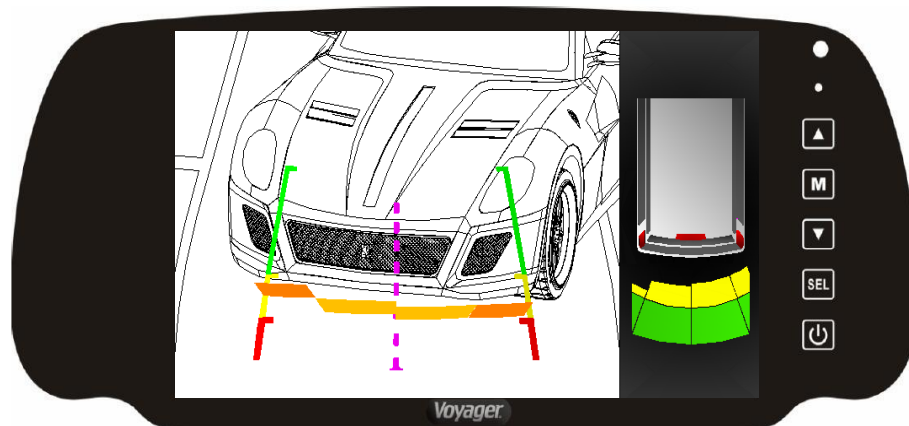
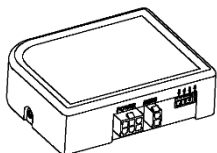


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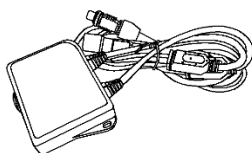
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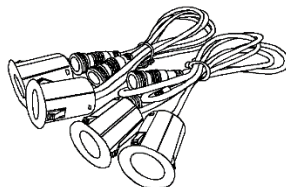
Hardware List:



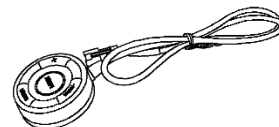
PDC Module



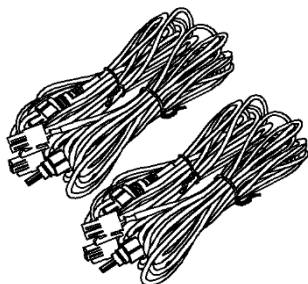
OSD Module



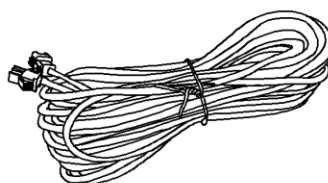
Sensor x 4



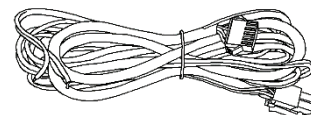
Button



Sensor extension cable x4



Button extension cable



Power Cable



Rubber Supporters x 4



Manual

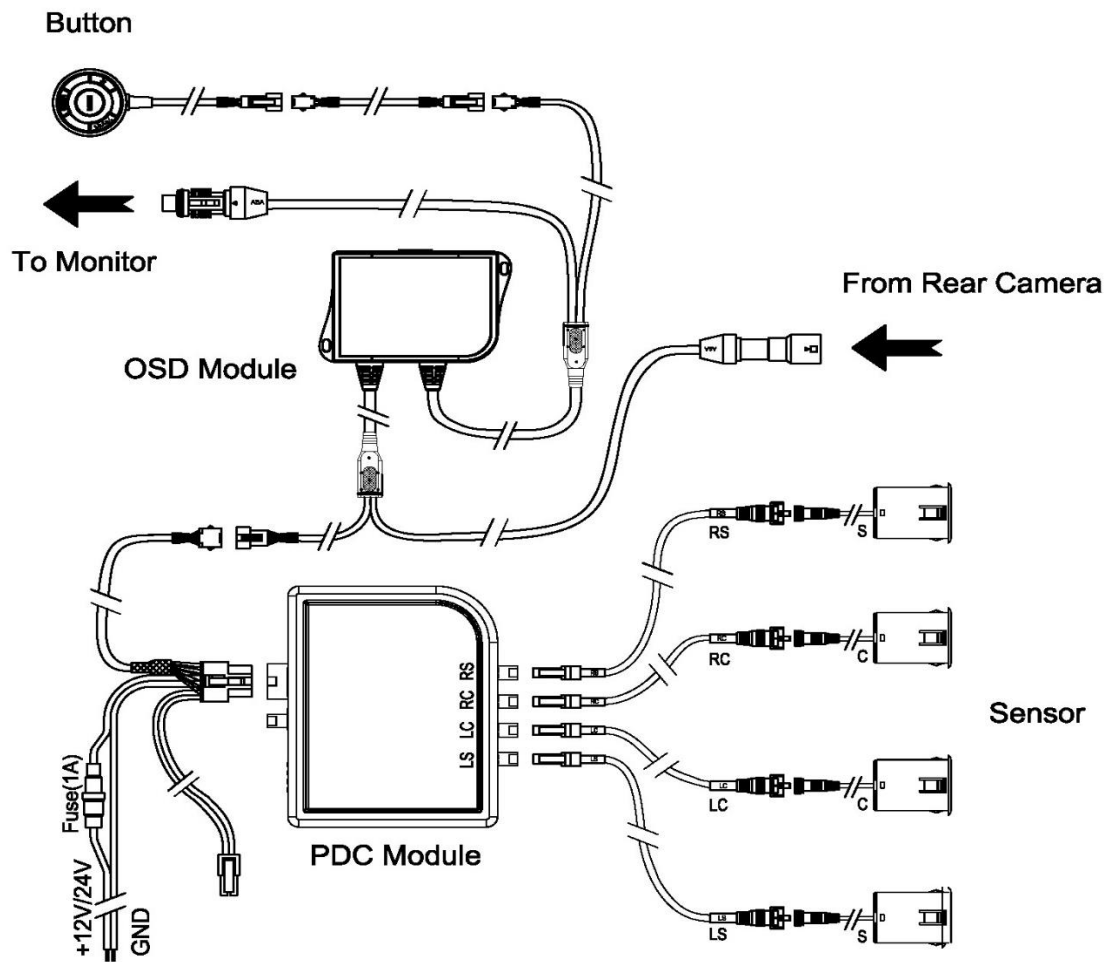
Introduction:

This graphic overlay system to work in conjunction with your camera and monitor to provide rear parking assistance. There are a number of graphic and sound options in the setup menu.

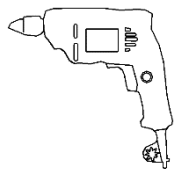
Safety Information:

THE SYSTEM IS DESIGNED TO ASSIST YOU IN DETECTING OBSTACLES AND WILL NOT REPLACE SAFE DRIVING PRACTICE.

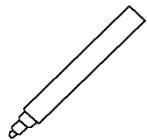
INSTALLATION



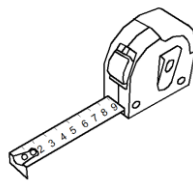
REQUIRED TOOLS



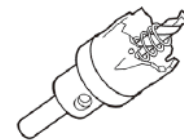
Electric Drill



Marker Pen

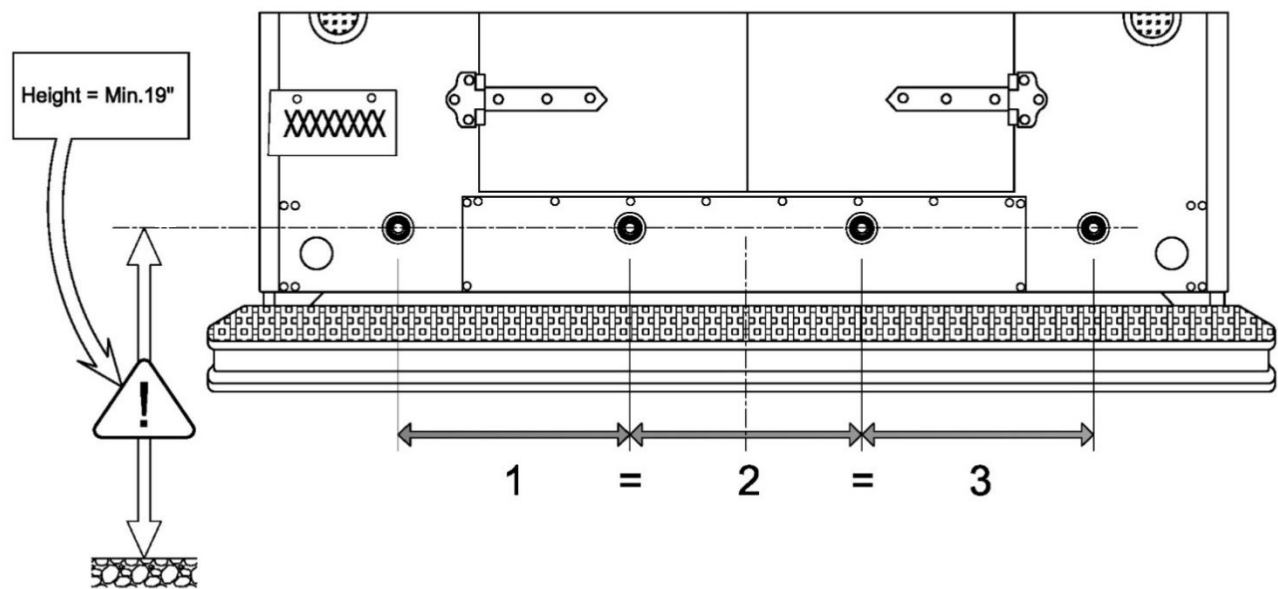


Tape Measure

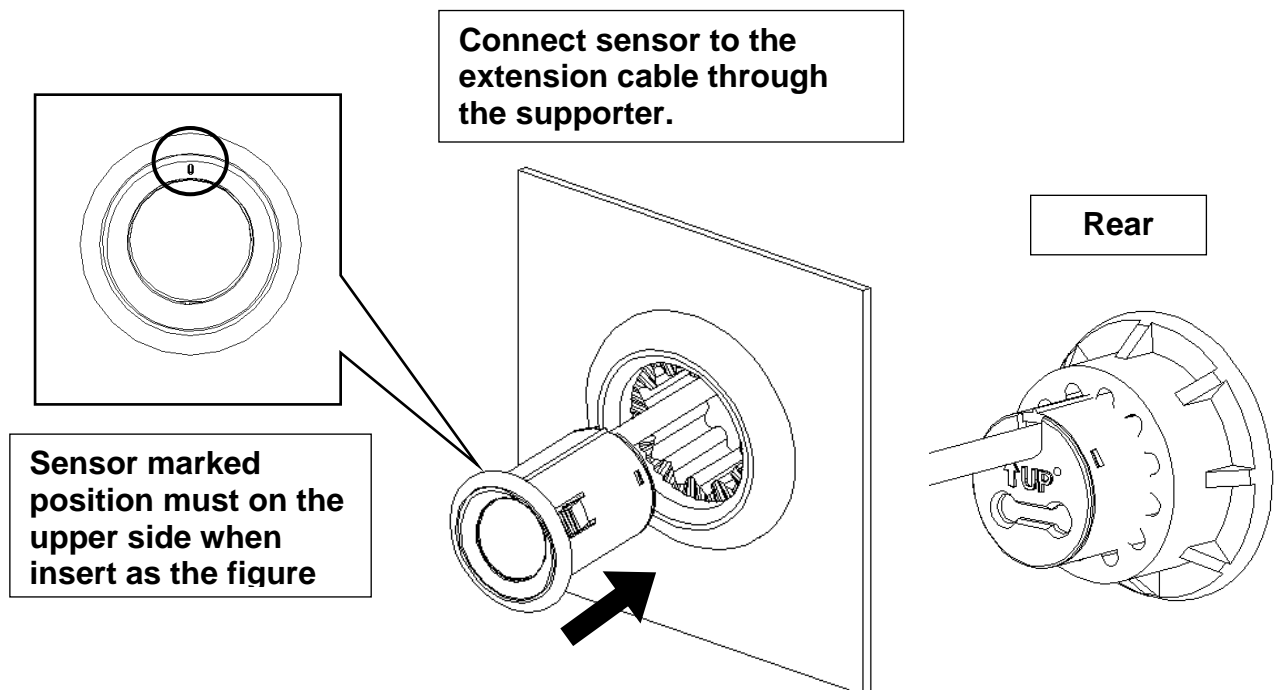


SPC5 (1 1/4")

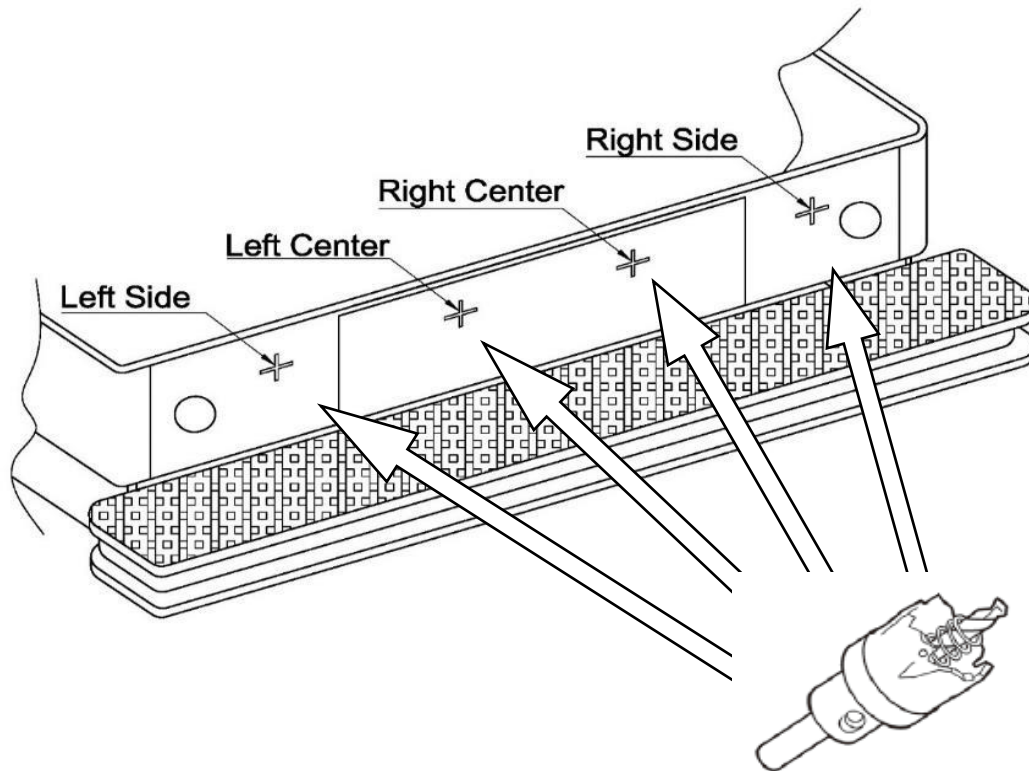
POSITION AND MARK BUMPER FOR DRILLING



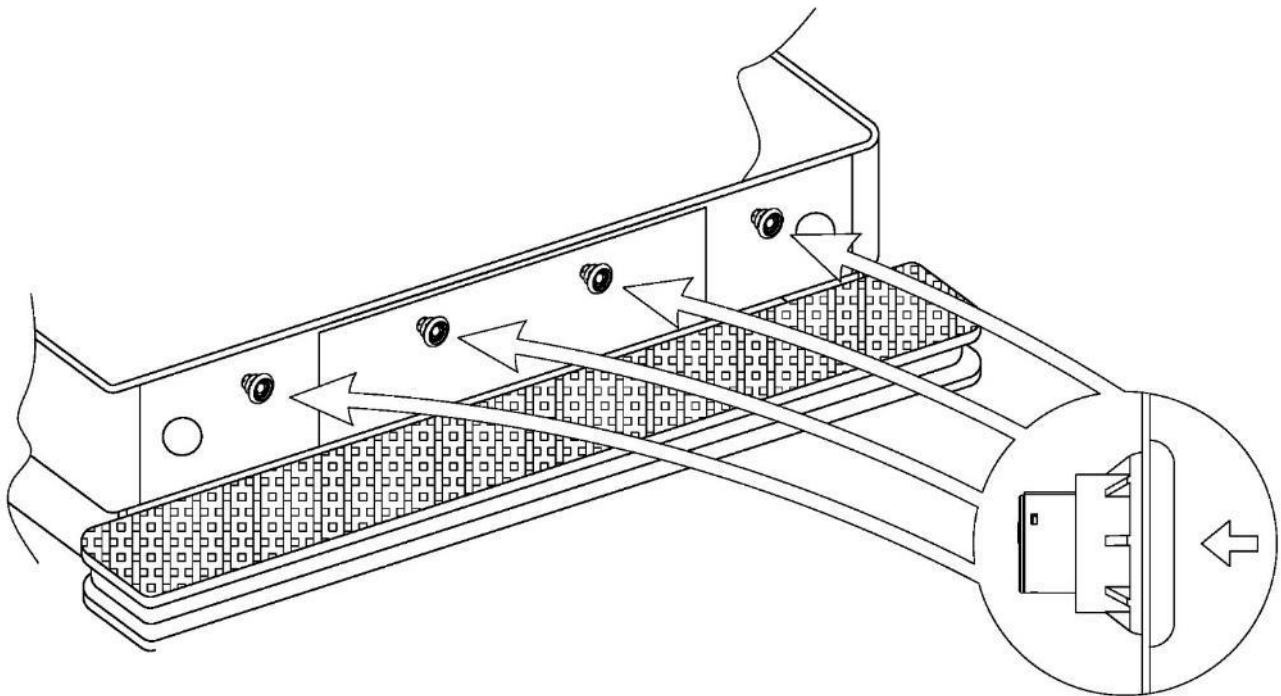
INSERT THE SENSORS INTO THE RUBBER SUPPORTERS



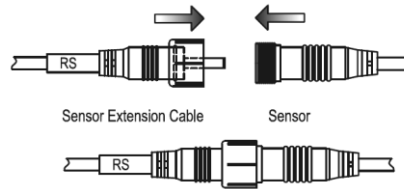
DRILL BUMPER



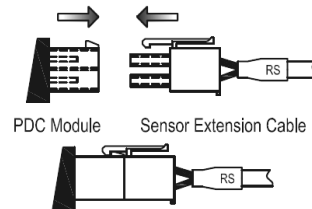
INSERT SENSORS INTO BUMPER



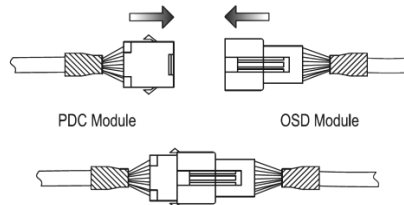
CONNECT SENSORS TO THE EXTENSION CABLE



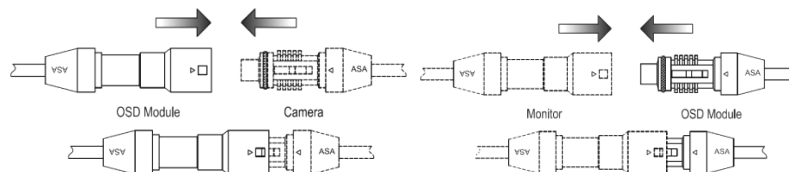
CONNECT SENSORS AND HARNESS TO CONTROL UNITS



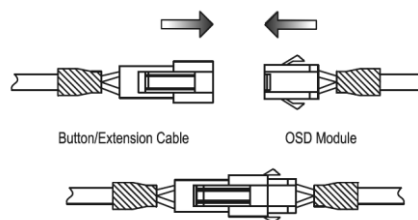
CONNECT PDC MODULE AND OSD MODULE



CONNECT OSD MODULE WITH CAMERA AND MONITOR



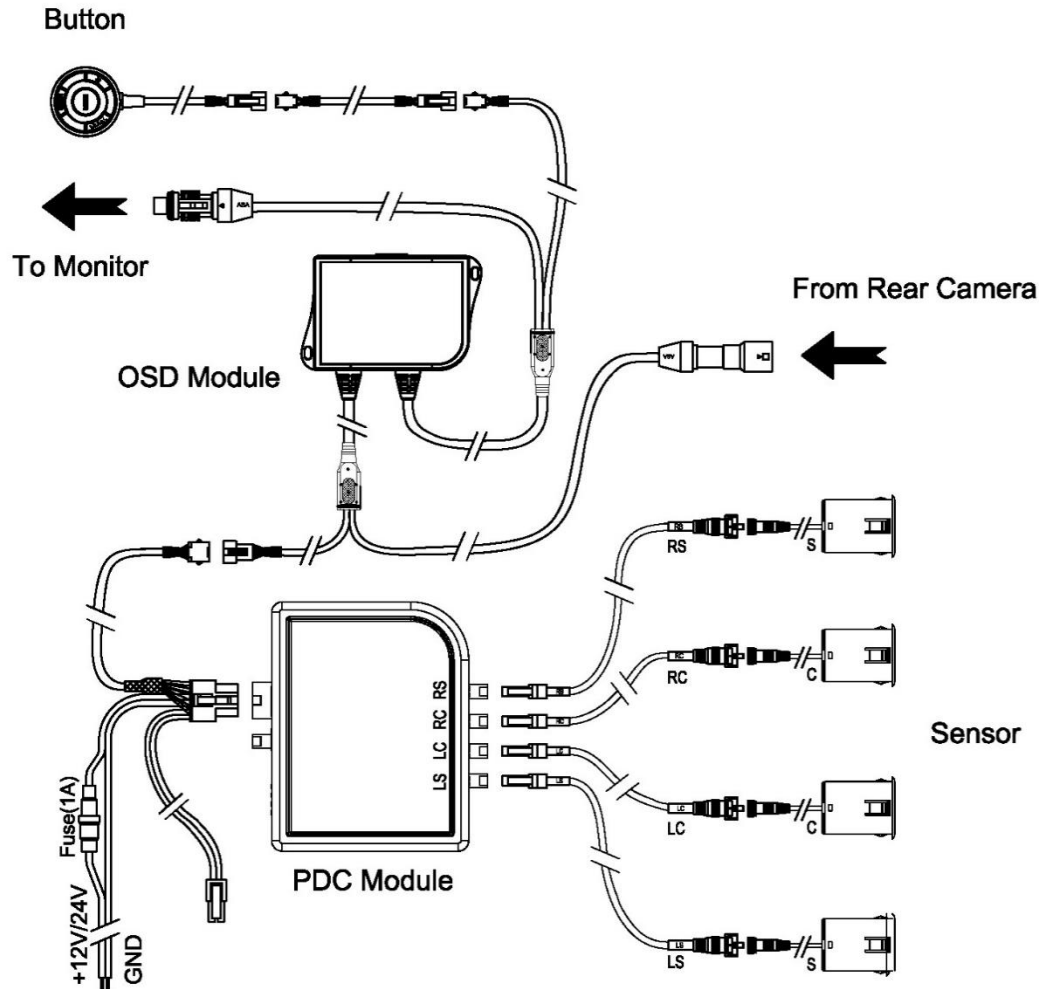
CONNECT CONTROL BUTTON CABLE WITH OSD MODULE



CONNECT WIRING HARNESS TO THE VEHICLE

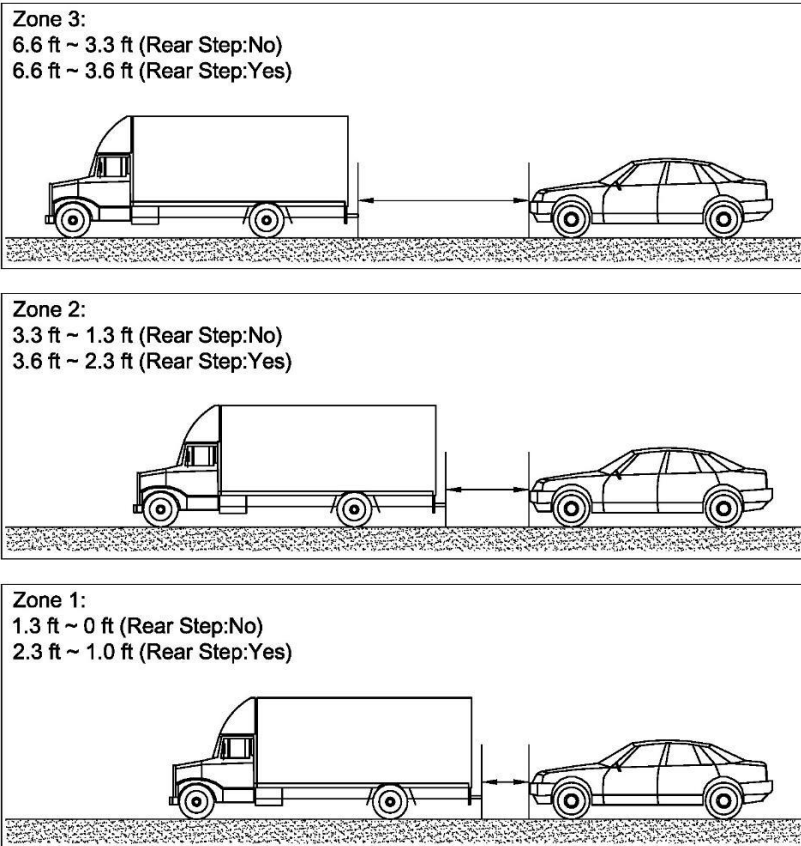
Black - Ground (Use the ring terminal to connect ground wire to vehicle body directly)

Red - 12V/24V Reverse Power



ACTIVATE REVERSE GEAR TO TEST SENSOR FUNCTION

1. Start Vehicle
2. Place in Reverse Gear
3. The system should beep once within 1 second of activation. Please refer to the self-check table for other start up codes.
4. Reference zone beeping frequency table and test system by reversing vehicle to each zone and checking accuracy. Ensure test obstacle will not damage car (such as cardboard) until test is successfully completed.



ZONE BEEPING FREQUENCY TABLE

Zone	Frequency (Hz)	Remark
1	0	Constant Beeping
2	6.25	Fast Beeping
3	1.56	Slow Beeping

PDC SELF-CHECK TABLE:

Speaker Sound	Status
1 Beep	System is functioning good
2 Beeps	1 Sensor is disconnected/Damaged
3 Beeps	2-3 Sensors are disconnected/Damaged
4 Beeps	No sensors are connected

OVERLAY SYSTEM SETUP AND CALIBRATION

Introduction

The PDC-OSD has two modes of operation, one is 'user mode', the other is 'configuration mode'.

The following subsections describe user mode and configuration mode in detail.

Preparation for Setup

A camera and LCD monitor should be installed in conjunction with this PDC OSD system. Mount the camera at a suitable height and angle to get a clear view of the rear of the vehicle and part of the rear bumper.

Ensure all connections are made before the system is powered up.

Remote Control

While in setup/configuration mode, the remote control buttons provide the following functions:



'ENTER' to validate an input, go to next screen;

'+' to increase or change a value;

'-/Mute' to decrease or change a value, also used for Mute function.

'Mode' to change units between 'imperial' and 'metric'.

Note: On the value setting steps, if the '-' or '+' button is pressed quickly, the value will be updated one by one. But after 2 seconds of holding the button, the value will be updated quickly to speed up the adjustment of the values. Mute function is not operational when in setup mode.

User Mode

1. Menu Setting

1.1. Enter the User Mode

When system is active, push 'MODE' button to enter the user setting mode, this will bring up the user setting menu(See figure 1).

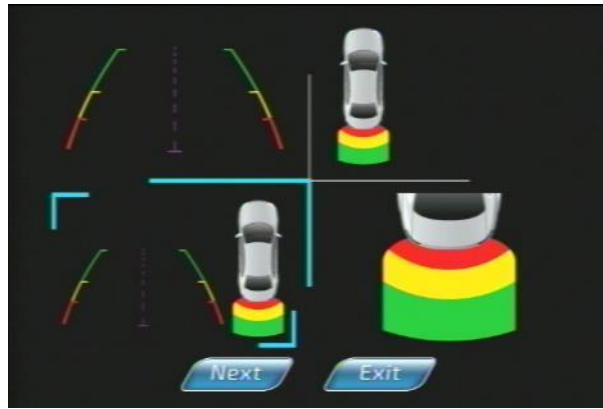


Figure 1:OSD Graphic Selection Menu

1.2 Select OSD graphic

Use '-' or '+' button to choose the OSD graphic style (see figure 1), push 'Enter' to confirm. Move the cursor the 'Exit' to exit the user setting, or 'Next' to enter into PDC setting menu.

1.3 PDC Setting

The high light menus can be set (see figure 2), use 'Enter' button to select or deselect the menu, use '-' or '+' button to move the cursor or change the setting value.



Figure 2:User Setting Menu

Volume, tone, Sensitivity of PDC can be adjusted on this screen.

Once complete press the 'EXIT' button then restart the system when you see the power off icon

2. Mute Control

When system is not in the menu or configuration mode, push the 'Mute/-' button can activate the mute function. The PDC volume can be mute (see figure 4).

To deactivate the mute function, the system needs to be powered down by removing the vehicle from reverse gear

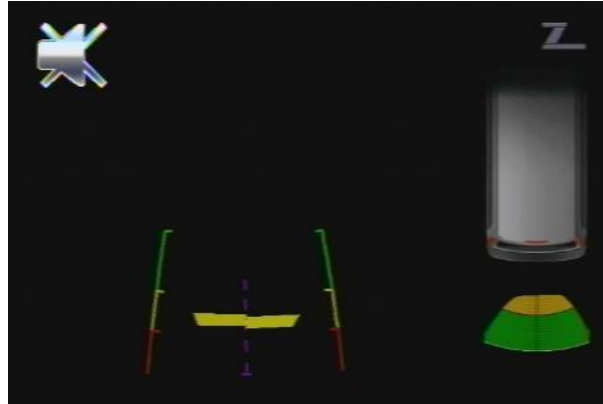


Figure 4: Mute Icon

Configuration & Calibration Mode

To enter the Configuration Mode: Turn on the system by placing the vehicle in reverse gear **while also** pressing the '+' button on the 4-button control unit. The first screen will show the OSD graphic setting menu (see figure 1).

2 Select the default OSD Graphic

Use '-' or '+' button to choose the OSD graphic style (see figure 1), push 'Enter' to confirm. Move the cursor to 'Exit' to exit the configuration setting, or to 'Next' to enter into PDC and OSD setting menu (see figure 5).

3 Configuration Step 3: PDC and OSD Setting

Use 'Enter' button to select or deselect the menu, use '-' or '+' button to move the cursor or change the setting value.



Figure 5: PDC and OSD Setting Menu

Volume, Tone, and Sensitivity are for setting the sensor system preferences of the driver. Sensitivity should be left at high unless the system is false alarming.

Rear Step is an added feature for use with trucks with an inbuilt rear step. It adds 1ft to the detection area (from the actual sensor) to allow for the step.

PDC maximum detection range

"Rear Step" - Yes is: 1ft ~2.3ft ~ 3.6ft ~6.6ft "Rear Step - No" is: 0 ~ 1.3ft ~ 3.3ft ~ 6.6ft

Vehicle Type is for the graphic overlay and chooses either a car or SUV/Truck graphic.

The OSD system must be calibrated correctly so the camera footage, graphics and audible warnings are all in synch.

The initial factory default settings must be modified to suit your installation. Here are the default settings:

Menu	Default Value
OSD Graphic	1
Volume	8
Tone	1
Rear Step	Yes
Sensitivity	High
Vehicle Type	SUV/Truck
Camera Height	113"
Camera Center Distance	70"
Camera Quarter Distance	100 3/4"
Vehicle Width	118"
Camera Offset	-6"

4 Camera Installation Setting

The screen will show an image from the camera with a big red cross in its center and a small red cross at the quarter position (see figure 6). Go behind the vehicle and place objects on the ground so they are directly under the big cross and the little cross.



Figure 6: Image From The Camera with a Red Cross in the Center

4.1 Measures the distance from the object under the big center red cross to the point directly under the camera on the ground. Record this value as the camera center distance.

4.2 Measures the distance from the center red cross to the quarter small red cross, record this value as the camera quarter distance.

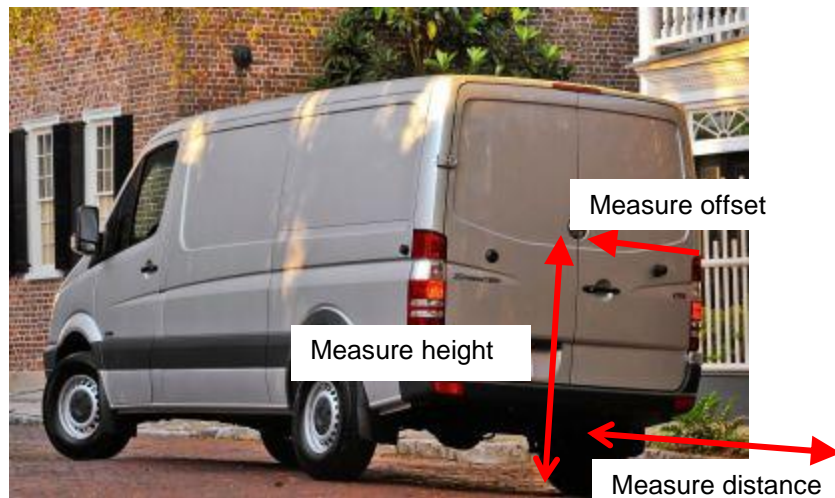


Figure 7: Camera Measurement

5 Camera Height Configuration

Measures the height of the camera. The height can be entered at this configuration stage and indicated by the height icon. When entering this stage, the last stored height value will be displayed.

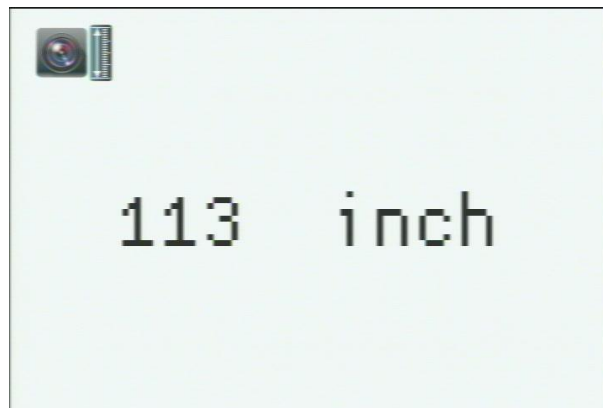


Figure 8: Height Parameter Icon

Use the '+' and '-' buttons on the push button to change the value (see figure 8).

Note that the unit (metric or imperial) can be changed by 'MODE' button which is at the centre of the remote control.

When the displayed height is entered, press the '**ENTER**' button (top of the push button) to proceed to the next configuration step. The default value is 113".

6 Horizontal Distance from the Camera to Center of Large Red Cross Projected on the Ground

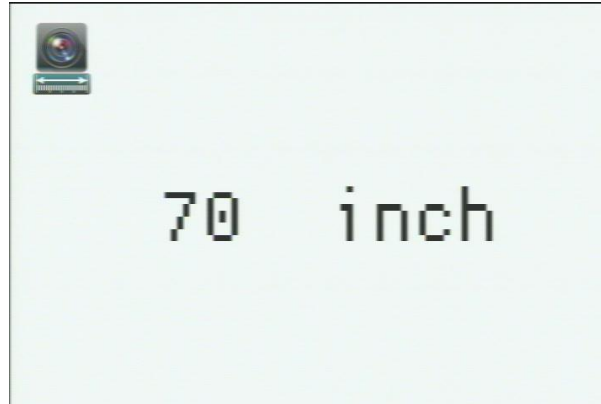


Figure 9: Distance Parameter Icon

Enter the horizontal distance from the ground directly below the camera to center of image as has been recorded. Use '-' and '+' buttons to change the value of the distance from the camera to center of the image on the screen to match with actual measured distance (see figure 9).

After setting the 2 distance parameters, press the **'ENTER'** button at the top of the remote control. The default value is 70".

7 Distance from Camera Center Image (the big red cross) to the quarter image from right (small red cross) as previously recorded.

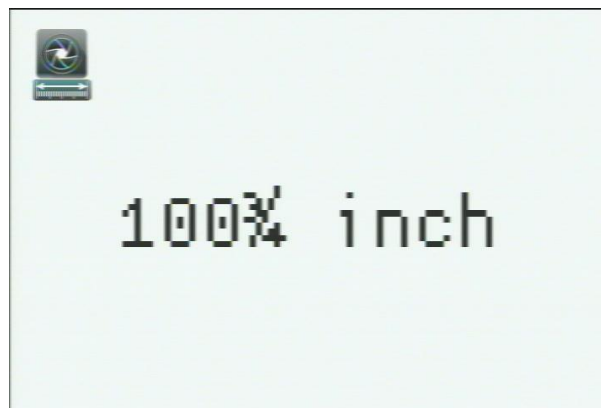


Figure 10: Lens focus length setting Icon

Enter the horizontal distance from the camera to center of the big red cross to the center of the small red cross as has been recorded. Use '-' and '+' buttons to change the value of the distance from the camera to center of the image to quarter image size from right on the screen to match with actual measured distance (see figure 10).

After setting the width parameter, press **'ENTER'** button at the top of push button to proceed to Configuration Step 5. The default value is 100 3/4".

8 Configuration Step 5: Guideline Width Configuration

Enter the width of the vehicle to create the guidelines (see figure 11).When entering this stage the last stored width value will be displayed. Guideline width is set to the width of the vehicle and adjustable from 39 1/2" to 118".The default value is 118".

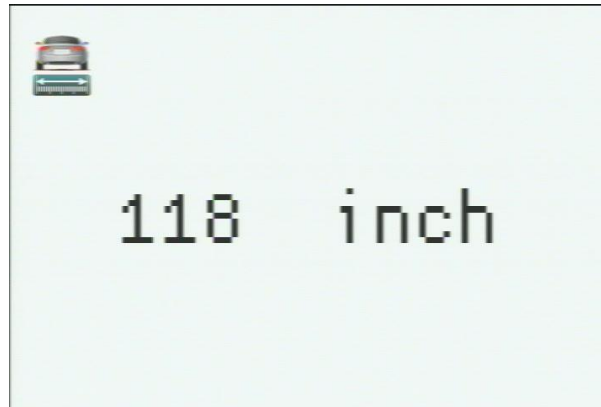


Figure 11: Width Parameter Icon

After setting the width parameter, press '**ENTER**' button at the top of push button to proceed to Configuration Step 6.

9. Camera Offset Setting

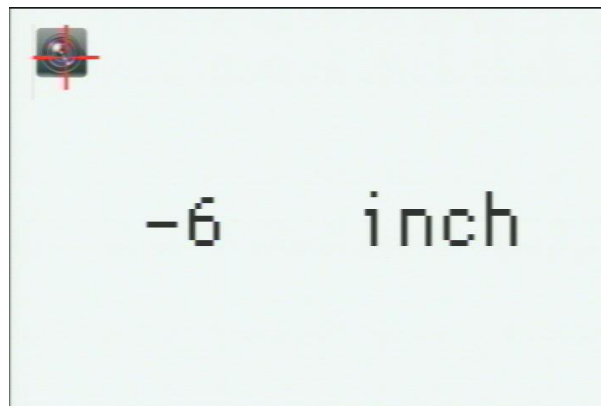


Figure 12: Camera Offset Parameter Icon

This is the offset setting step as indicated by the camera offset icon (see figure 12).When entering this step the last stored offset value will also be displayed. The default value is -6"

Use the '-' and '+' buttons on the push button to change the offset parameter values.

When the displayed offset is entered; press the '**ENTER**' button to proceed.

Guideline offset from the center of the number plate can be adjusted from -19 1/2" to +19 1/2".

10 Complete the Configuration Mode

Once the Power Off icon (see figure 3) appears on screen, the system should be shut down by taking the vehicle out of reverse gear. This will save the settings. The next time the system is restarted the new settings will appear.

Configuration Done.



For further technical support call: 1-877-305-0445