



ADVANCED DRIVER ASSISTANCE SYSTEMS

INSTALLATION / OWNER'S GUIDE

PSD4DSP

SAFETY
FIRST

4281156 REV: 0

WARNING

This product is intended to assist in safe driving and to allow the driver to have a broader rear view while the vehicle is in reverse. You, as the driver, are solely responsible for the safe operation of your vehicle and the safety of your passengers according to local traffic regulations. Do not use any features of this system to the extent it distracts you from safe driving. Your first priority while driving should always be the safe operation of your vehicle. Voxx Electronics Corporation cannot accept any responsibility whatsoever for accidents resulting from failure to observe these precautions or safety instructions.

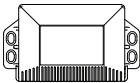
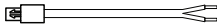
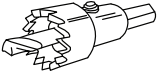
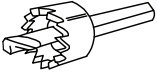
1. This product utilizes high voltage. Any unauthorized modifications or damage to the product may result in electrical shock. Handle all components with care. Inspect regularly for damage to components and cabling.
2. You are responsible for ensuring that the installation of this product does not void or affect the vehicle manufacturer's warranty. VOXX Electronics Corporation or its subsidiaries are not liable in full or in part for improper installation resulting in loss or damage to your property, or for voiding all or part of the vehicle manufacturer's warranty.
3. Do not apply excessive force to any of the components contained within this kit. Excessive force used before, during or after installation that results in a damaged or non-functional part will void all warranties.
4. Please follow the procedures in this installation manual. Improper installation or modification of this product will void all warranties.

Specification

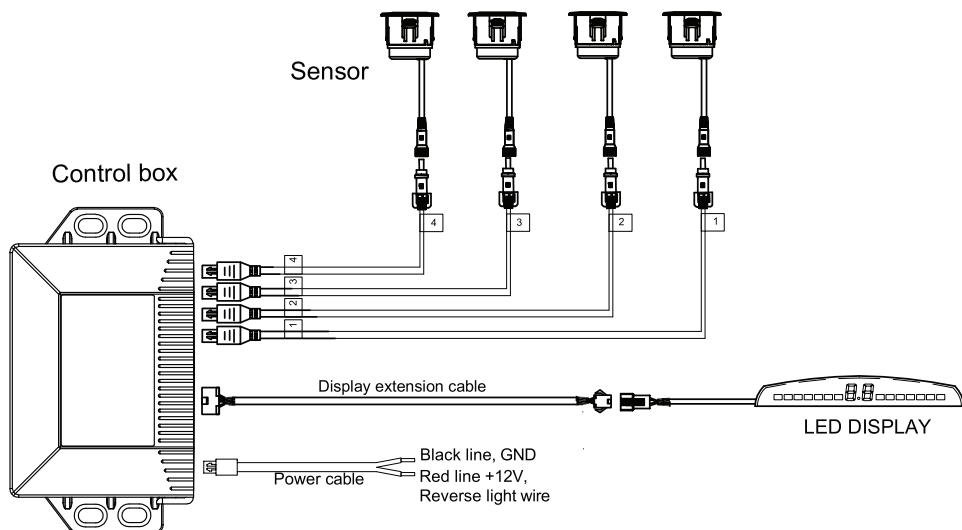
Technical Data

NO	ITEM	SPEC
1	Working Voltage	10.5~16V DC (Rated @ 12V)
2	Rated Current (max.)	300mA
3	Display Distace: m (in)	0.3m (12") ~ 2.5m (99")
4	Blind Area: m (in)	<0.3m (12")
5	Detection Tolerance: m (in)	±0.03m (1")
6	Warning Type	LED Display / Buzzer
7	Working Temperature F	-40 to +160

Kit Contents

 CONTROL BOX - 1	 DISPLAY - 1	 SENSOR - 4
 DISPLAY EXT - 1	 POWER HARNESS - 1	 RUBBER SLEEVES - 4
 T-TAP - 2	 7° SENSOR TRIM - 4	 13° SENSOR TRIM - 4
 28mm DRILL BIT	 22mm DRILL BIT	 CABLE TIES - 5
 VELCRO - 1		

System Layout

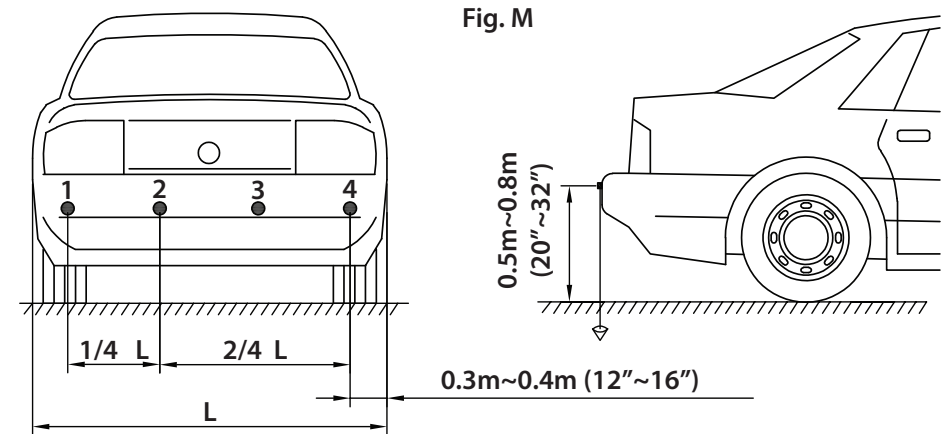


INSTALLATION

Sensor Installation - Plastic Bumpers

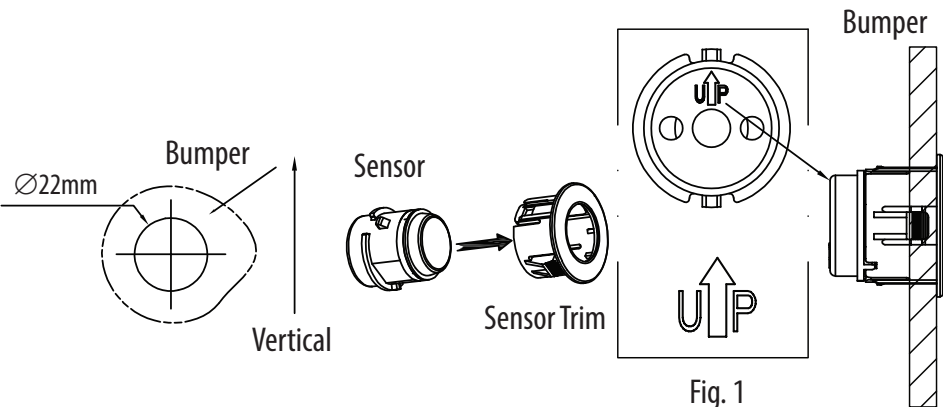
The sensors should be installed on the rear bumper of the vehicle. To provide the best coverage and warning possible, the sensors should be installed evenly across the rear bumper. The measurements below will assist with sensor placement. It is recommended to use masking tape on the vehicle bumper to prevent any accidental damage. Mark each sensor location for drilling.

Warning: Always check the drill bit size before drilling the sensor holes.



Check each sensor hole after drilling. Make sure to remove any burrs around the hole. Check each hole to ensure there is no metal or plastic object behind the hole that will contact the sensors after installation. Any object applying pressure to the sensor could cause a false warning.

Sensors need to be installed with the “UP” marking facing as shown in Fig. 1. Sensors must be fully inserted and fit flush to the bumper face. Connect each sensor to the matching numbered sensor extension harness. Route the extension harness to the control box location.



INSTALLATION

Sensor Installation - Metal Bumpers

The sensors can be installed into a metal bumper. The provided rubber sensor sleeves must be used when installing the sensor into a metal bumper. The rubber sleeves require a 28mm hole for mounting. Be sure to check the drill bit size before drilling any holes.

Note: Use Fig. M on the left to assist with sensor placement.

Drill the 4 sensor holes using the 28mm drill bit provided. Check each sensor hole after drilling. Make sure to remove any burrs around the hole. Check each hole to ensure there is no metal or plastic that will contact the sensor after installation. Any object applying pressure to the sensor could cause a false warning.

Sensors need to be installed with the "UP" marking facing as shown in Fig. 2. Install the rubber sleeve into the metal bumper then install the sensor into the rubber sleeve. Connect each sensor to the matching numbered sensor extension harness. Route the extension harness to the control box location.

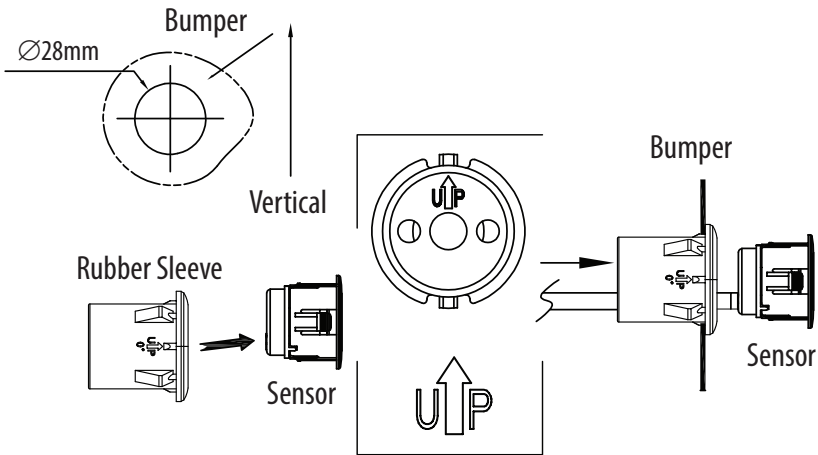


Fig. 2

INSTALLATION

Control Box Installation

Locate a place to mount the control box inside of the vehicle trunk or truck cab. The control box is NOT water resistant.

- Connect each sensor extension harness to the matching numbered port on the control box.
- Connect the display extension cable to the control box and route to the mounting location.
- Connect the power harness to the control module.
- Route the BLACK Wire (Ground) to a grounding point on the vehicle body or chassis. If using a self tapping screw, be sure to scrape away any paint from the surface before drilling a hole.

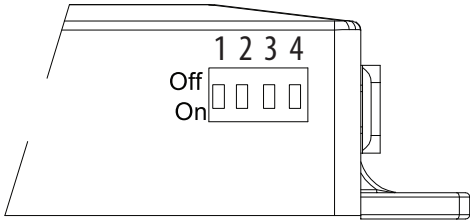
NOTE: Always check for obstructions before drilling holes in the vehicle body or chassis.

- Route the RED Wire (Power) to the vehicle's reverse light circuit. This wire will test 12v (+) when the vehicle is ON and in reverse gear.

Note: Some vehicles are equipped with a PWM (Pulse Width Modulation) reverse light circuit. If the vehicle has a PWM lighting circuit a relay will be needed to provide a power source to the control module.

Control Box Setting

The control box is equipped with configurable dip switches. Use the guide below to help configure for the vehicle specific needs.



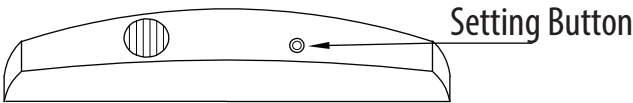
NO	Name	Status	Description
4	Dip Switch 4	OFF	NA
		ON	NA
3	Dip Switch 3	OFF	NA
		ON	NA
2	Dip Switch 2	OFF	No Spare Tire
		ON	Spare Tire
1	Dip Switch 1	OFF	Standard Sensitivity
		ON	Low Sensitivity

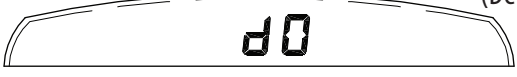
INSTALLATION

Display Installation

Buzzer Install - Place the buzzer in a location that is close to the driver's seat. The buzzer should be placed in an area that will allow it to be hidden, but not completely surrounded. This will allow the sound to be clearly audible to the driver.

Display Install - The display can be mounted on the vehicle dashboard, cabin roof, or the rear window. The display can be configured to the specific vehicle needs. Please use the chart below to configure the display settings.



Mode	Definition	Display	Description
Volume	High	U3	 (Default) Press and hold the setting button until the display shows "U2" then release the button. Press and release the setting button to cycle through the volume adjustment settings. The system will automatically save the setting and return to display "--".
	Mid	U2	
	Low	U1	
	Off	U0	
Measurement Display	Metric	F0	 (Default) Press and hold the setting button until the display shows "F1" then release the button. Press and release the setting button to cycle through the measurement display settings. The system will automatically save the setting and return to display "--".
	Imperial	F1	
Display Mode	Normal	d0	 (Default) Press and hold the setting button until the display shows "d0" then release the button. Press and release the setting button to cycle through the display mode settings. The system will automatically save the setting and return to display "--".
	Upside Down	d1	
	Upside Down Mirror	d2	

TESTING

Testing

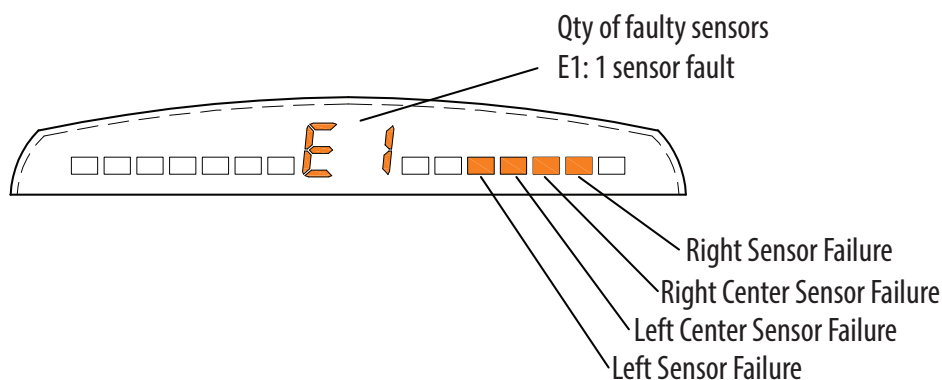
After the installation is complete, power the system ON in an open area with no obstacles. The system will beep (1) time and show "--" on the display. Slowly reverse toward an object. The system will begin beeping at ~2.5m (99") away from the object. The beeping frequency will increase as the distance to the object decreases. The display will show the detection zone and distance to the object.

Troubleshooting

- If there is no response after the power is on; check the connection of the control box, sensor, display, and all the connectors.
- The buzzer gives out a warning even if there are no obstacles; check the sensor installation.
- If the direction of the warning is not correct; check the connection number of the sensor to the control module.

Self Diagnostics

Each time the system turns on it will perform a self diagnostic test. If all sensors are normal, the system will beep (1) time and display (--). If there is a sensor fault the system will beep (2) times and show the error code on the display.



Sensor Display Operation

The system display will show the distance and location of any detection obstacle. The graph below can be used for both display and buzzer only systems.

Distance	Digital Display Meters	Digital Display Inches	Left LED BAR	Right LED BAR	Buzzer Warning
<0.30m	-P	-P			Constant Beep
0.30≤ L <0.45m	0.3~0.4m	12~17in			BI-BI-BI
0.45≤ L <0.75m	0.5~0.7m	18~29in			BI--BI--BI
0.75≤ L <1.05m	0.8~1.0m	30~41in			BI---BI---BI
1.05≤ L <1.25m	1.1~1.2m	42~48in			BI----BI----BI
1.25≤ L <1.55m	1.3~1.5m	49~61in			BI-----BI-----BI
1.55≤ L <2.05m	1.6~2.0m	62~79in			BI-----BI-----BI
2.05≤ L ≤2.50m	2.1~2.5m	80~99in	No Display		No Sound
≥2.5m	No Display				

NOTES

12 Month Limited Warranty

Voxx Electronics Corporation (the Company) warrants to the original purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with new or reconditioned product, (at the Company's option) without charge for parts or repair labor. A transmitter for a vehicle security or remote start system is warranted for 12 months from the date of original purchase.

To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), authorization number, specification of defect(s), transportation prepaid, to an approved warranty station. This warranty is not transferable.

This Warranty does not cover damage to the vehicle's electrical system or costs incurred for the installation, removal or reinstallation of the product. This Warranty does not cover batteries, broken LCD transmitter display screens, nor apply to any product or part thereof which, in the opinion of the Company, has suffered or been damaged through alteration, improper installation, mishandling, misuse, abuse, neglect, accident, or by removal or defacement of the factory serial number/bar code label(s).

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 24 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

The company does not warrant that this product cannot be compromised or circumvented. THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT WITHOUT INSTALLATION LABOR.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.



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