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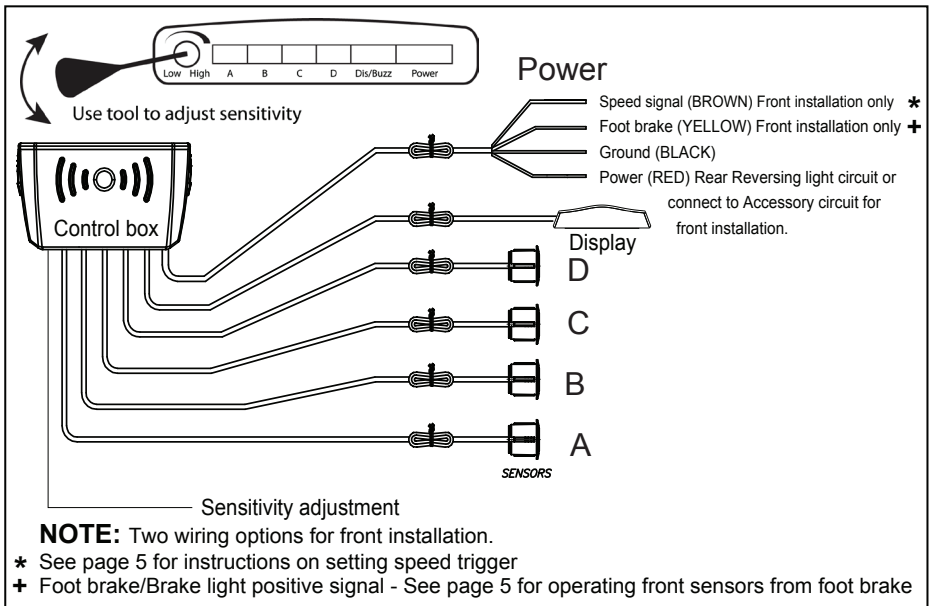
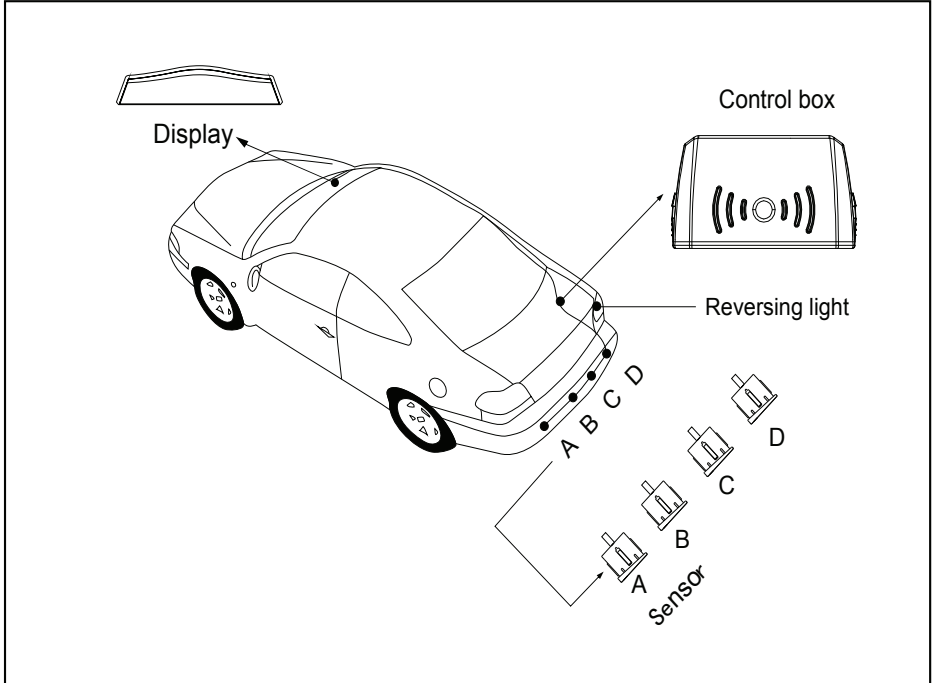
APS401R

12/24V PARKING SENSOR SYSTEM

CONTENTS

General Installation Diagram.....	3
Error Codes.....	4
Dip Switch Setting.....	4
Speed Signal Programming.....	5
Brake Pedal Control.....	5
Reverse Parking Mode.....	5
Parking Distance Alarm.....	5
Monitor Function Button.....	6
Sensor Installation Diagram.....	7
Advised Position to Install the Sensor.....	8
Drilling Position.....	9
Drilling.....	10
Sensor Installtion.....	10
Control Box Installtion.....	11
Trouble Shooting.....	12
Specifications.....	13
Notes.....	14, 15
Warranty.....	16

GENERAL INSTALLATION DIAGRAM

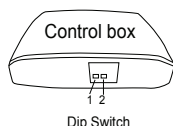


ERROR CODES

When the system turns on, each sensor is automatically tested. If the system cannot detect any of the sensors, the display will show an error code and beep to indicate which sensor is not detected. If a sensor is not detected, check the connections between the sensor and the module.

Error Codes	Beep	Definition
E1	One beep	Sensor A not detected
E2	Two beeps	Sensor B not detected
E3	Three beeps	Sensor C not detected
E4	Four beeps	Sensor D not detected

DIP SWITCH SETTING



DIP 1	Function			
	Front and rear mode selection			
	UP	ON	Front installation	0.3~0.9m
	DOWN	OFF	Rear installation	0.3~2.5m

DIP 2 (Front Installation)	Detection Range Adjustment for Front Installation		
	UP	ON	0.5m
	DOWN	OFF	0.9m

DIP 2 (Rear Installation)	Tow Bar Adjustment		
	UP	ON	Objects within 20cm (e.g. tow-bar) will not be detected. The displayed distance will be 20cm less than the actual distance.
	DOWN	OFF	Objects within 20cm will be detected. The display will show the exact distance.

SPEED SIGNAL PROGRAMMING (front installation only)

With the vehicle travelling at a constant low speed, press and hold the function button for 3 seconds and then release. If the speed signal programming is successful, the LED on the green switch will blink twice, indicating that the speed setting is successful. After programming the speed signal, when the vehicle speed drops below the programmed speed, the front parking sensors will activate; when the vehicle speed exceeds the programmed speed, the front parking sensors will deactivate.

Note: When programming the speed signal, DIP switch 1 must be set to ON (front installation mode).

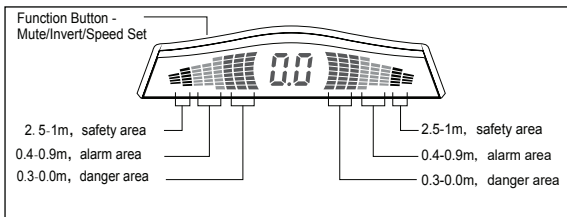
BRAKE PEDAL CONTROL (front installation only)

When the brake pedal is pressed, the front parking sensors will activate, when the brake pedal is released, the front parking sensors will remain active for 15 seconds, if no obstacle is detected within 15 seconds, the front parking sensors will deactivate; if an obstacle is detected within 15 seconds, the system will remain active for another 15 seconds.

REVERSE PARKING MODE

While the vehicle is in reverse, the rear parking sensors will be activated. While the vehicle is not in reverse, the rear parking sensors will be deactivated.

PARKING DISTANCE ALARM



Sound alarm
Silent
Bi.....Bi.....Bi.....
Bi..Bi..Bi..
Bi.....

Left Sensor (Sensor A): Displays left LED segments
Middle Sensors (Sensor B & C): Displays both left and right LED segments
Right Sensor (Sensor D): Displays right LED segments

MONITOR FUNCTION BUTTON

Press the function button to mute/unmute the audible alarm.

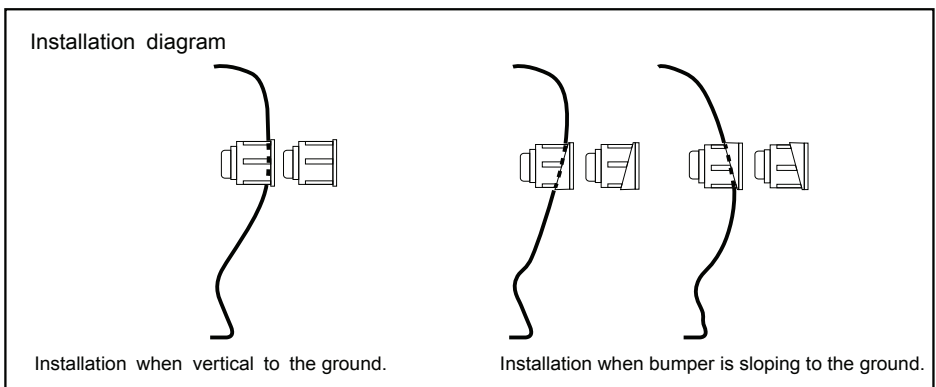
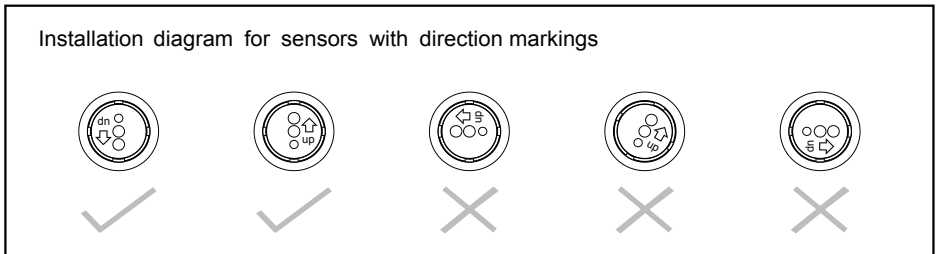
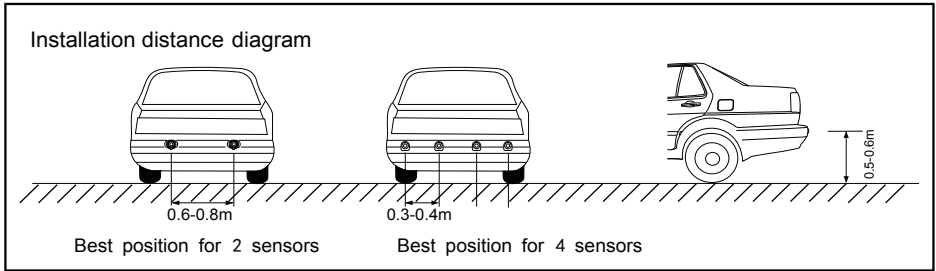
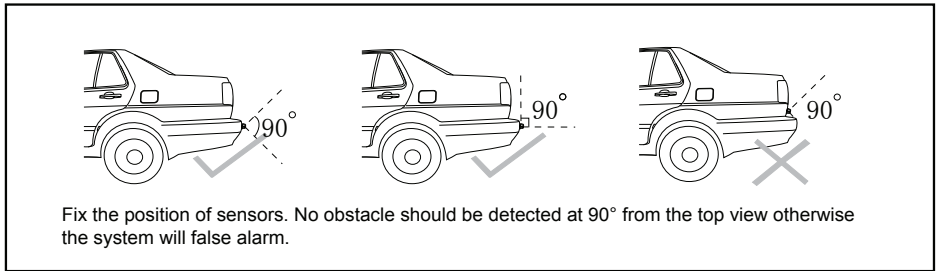
DISPLAY ORIENTATION ADJUSTMENT/ MOUNTING MODE ADJUSTMENT.

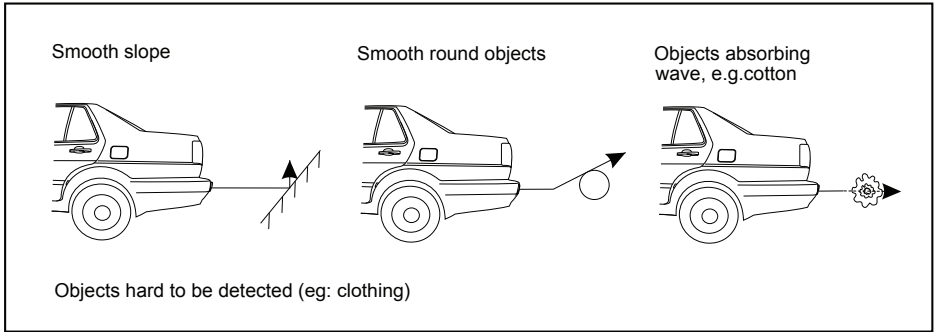
To mirror or flip the display, press and hold the function button according to the table below to set the desired display mode.

Release the function button to set the configuration.

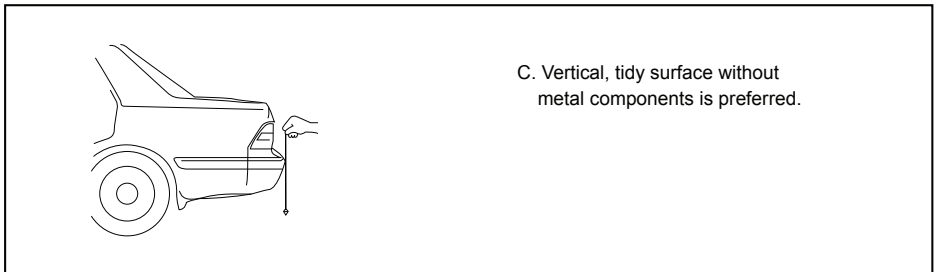
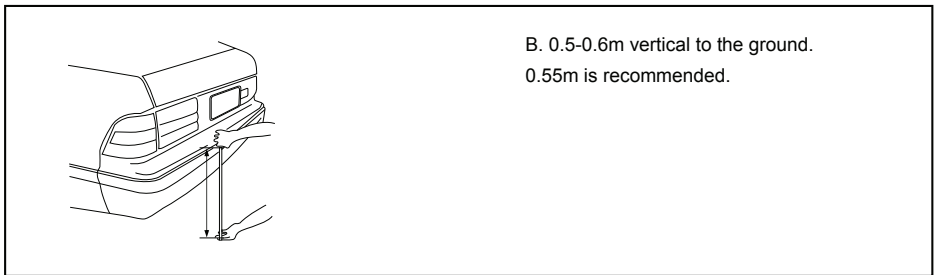
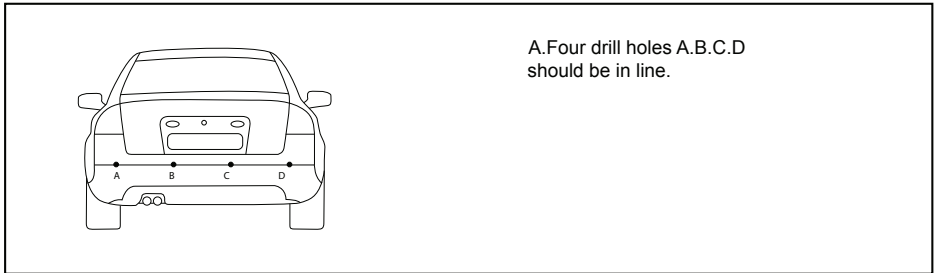
Duration	Display Icon	Display/Mounting Configuration
10 Seconds	"FU"	Front roof installation
13 Seconds	"8U"	Rear roof installation
16 Seconds	"nu"	Rear roof installation through rearview mirror
19 Seconds	"88"	Dashboard installation

SENSOR INSTALLATION DIAGRAM

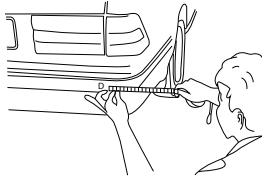




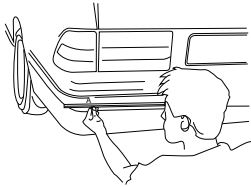
ADVISED POSITION TO INSTALL THE SENSOR



SELECT DRILLING POSITION FOR SENSOR A & D



A. Choose suitable drilling positions for A and D sensor and mark

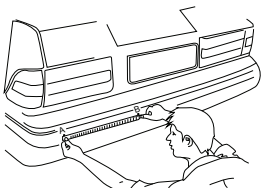


For best detection angle, position A & D sensor 8 - 13cm from the edge.
Preferred distance is 11cm

SELECT DRILLING POSITION FOR SENSOR B & C

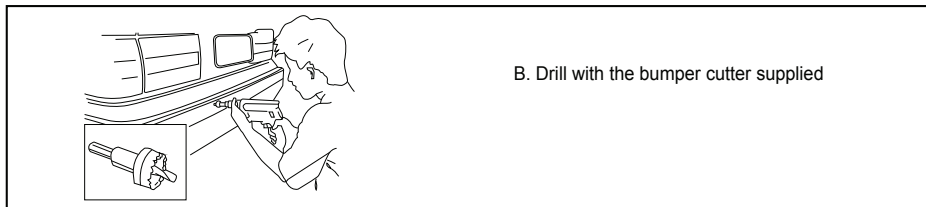
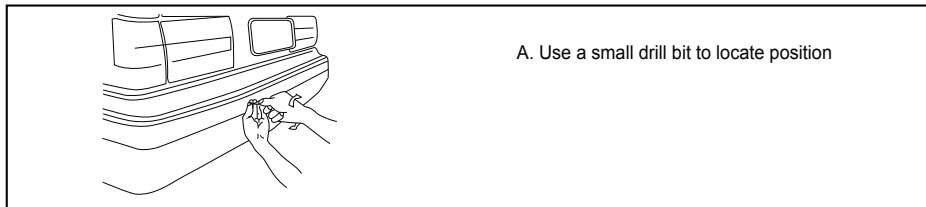


A. Measure the distance between sensor A and D

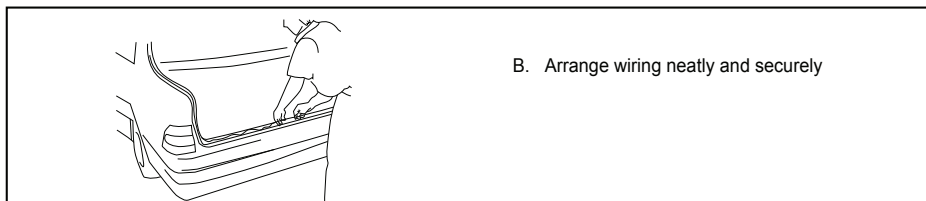
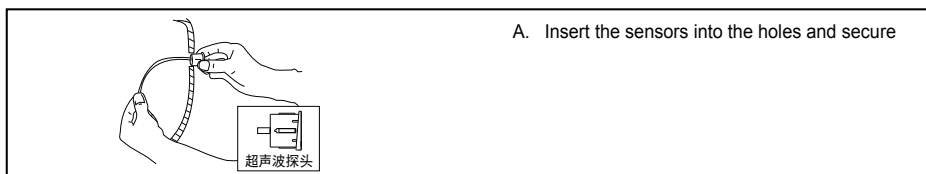


Divide distance by 3 and mark sensor B & C

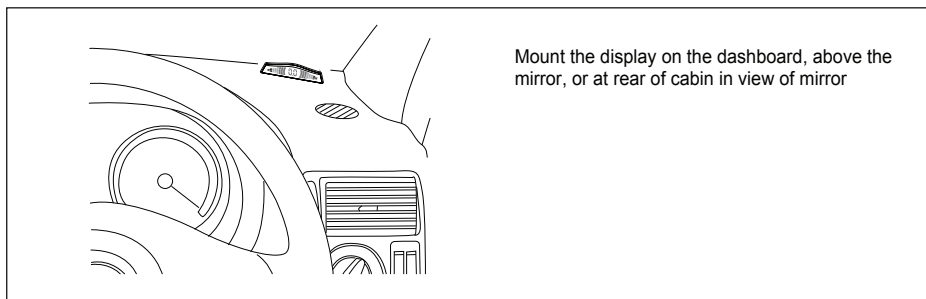
DRILLING



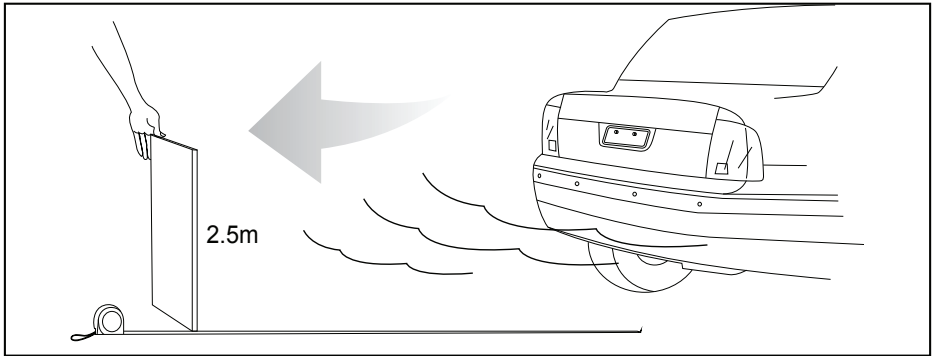
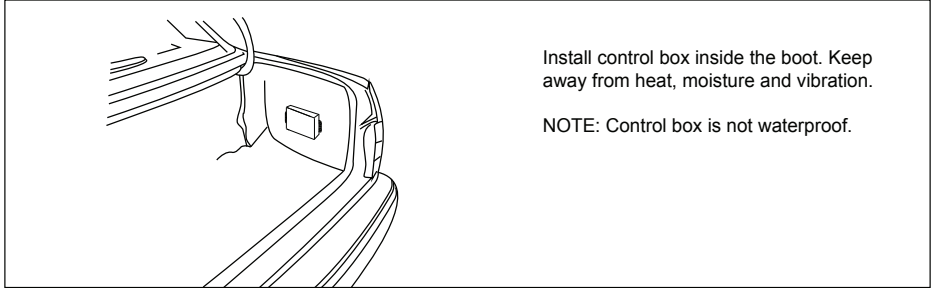
SENSOR INSTALLATION



OTHERS



CONTROL BOX INSTALLTION



TROUBLE SHOOTING

Problem	Cause	Solution
The speed signal configuration fails.	The speed signal wire is not connected to the vehicle's PWM speed signal wire	Connect the brown wire to the vehicle's PWM speed signal wire
	The vehicle speed signal is integrated into the CAN-bus	Install a CAN interface with PWM signal output
The system is not activating.	The supply voltage is below <9 volts	Charge the vehicle's battery
	The fuse is blown	Replace the fuse with the same amperage fuse
	(Rear installation only) DIP switch 1 is set to ON	Set DIP switch 1 to the OFF position
The system is false alarming.	The sensitivity is set too high	Turn the sensitivity pot on the control module counter clockwise
	Either the tow-bar or another protruding object is being detected	Set DIP switch 2 to the ON position
	The sensors are angled too low or mounted too close to the ground	Change the angle of the sensors with angled spacers or relocate the sensors
The system is not detecting obstacles consistently.	The sensitivity is set too low	Turn the sensitivity pot on the control module clockwise
	The sensors are angled too high or mounted too high off the ground	Change the angle of the sensors with angled spacers or relocate the sensors
An error code is displayed when the system is powered on.	One of the sensors or sensor cables is not connected or is loose	Check the connections between the sensor cables and the control module

SPECIFICATIONS

GENERAL

- Rated Voltage: 12/24V DC
- Operating Range: 9-32V DC
- Operating Current: 20~150mA @ 12V

LED/BUZZER

- Proximity Alert: Visual & Audible Tone
- Audible Buzzer: 70~90dB @ 10cm
- Cable Length: 8m (LED display)

CONTROL BOX

- Adjustments: DIP Switch 1 - Front or Rear Use
DIP Switch 2 - Front Range Select / Tow Bar Adjustments
- Front Setting: Speed Setting Adjustment
- Front Setting: Auto On/Off with Brake
- Power Leads: 4.5m
- Dimensions: 100 x 54 x 24mm

SENSORS

- Sensor Type: Angled Rubber
- Sensor Size: 20mm
- Sensor Hole Cut-out: 21mm
- Sensor Cable Length: 3.5m (with sensor attached)
- Sensor Installation: Under Mount or In-Bumper Mount
Front: =400~500mm High
Rear: =500~600mm High
- Detecting Distance: Front setting: 0.3~0.9m
Rear setting: 0.3~2.5m
- Working Temperature: -30° to +85°C
- Water Resistance: IP68
- Sensor Dimensions: 26W x 26H x 23.8Dmm
- Under Mount Dimensions: 61W x 31H x 22.4Dmm

INCLUDES

- 1x Control Box
- 4x Sensors & Lead Assemblies
- 1x LED Display with 3M Tape
- 4 x Under Mount Brackets
- 1 x Power Wiring Harness
- 1x Speed Programming Cable (Green Button)
- 1x Hook & Loop Fastener with 3M Tape
- 1x 21mm Hole Saw
- 1x Swivel Bracket with 3M Tape
- 8x Stainless Steel 25mm Screws
- 10x Cable Ties
- Angled Shims (4x7°, 4x10°, 4x13°)
- Instruction Manual

NOTES

NOTES

WARRANTY

Congratulations on your purchase of a quality Mobile Safety System! You're joining thousands of satisfied customers who enjoy & experience the benefits of the products we distribute. In the unlikely event that some technical difficulty arises with your purchase, be assured that we are most anxious to see that the problem is quickly rectified to your satisfaction. Please familiarise yourself with the following simple conditions of our warranty. This warranty covers faults through component failure or failure of the product to operate in accordance with published specifications. Product failure as a result of unreasonable environmental conditions, accident, misuse, improper installation, unauthorised repair, vehicle electrical or wiring faults or neglect etc, will not be covered by this warranty. Removal and installation costs, if any, would be paid by the owner as well as any freight or postage costs of transporting the product to AUTOBACS AUSTRALIA PTY LTD and shall not be liable or responsible for any loss of use of this product or any form of consequential loss.

CONSUMER WARRANTY

This product is warranted by AUTOBACS AUSTRALIA PTY LTD to be free from defects in materials and workmanship under **NORMAL USE** for a period of **TWENTY FOUR MONTHS** from the date of purchase.

WITHIN 30 DAYS OF PURCHASE DATE:

Please return the unit for replacement to our National Service Centre or the Retailer from where you made the purchase. All accessories must be included. Proof of purchase date **must** accompany the products.

AFTER 30 DAYS OF PURCHASE DATE:

Warranty repair and service is carried out by our National Service Centre. Repair and service will be carried out at no cost to the owner if proof of ownership and the date of purchase can be verified to the satisfaction of the authorised centre concerned with this repair. This proof should take the form of either:

- The warranty card accompanying this product, stamped and dated by the dealer.
- A Tax Invoice or Receipt showing full details of original vendor, purchaser, model number and serial number.

COMMERCIAL WARRANTY

A product used in or associated with a commercial application will carry a limited SIX MONTHS warranty.

An abnormal commercial application is one where usage, dust, vibration, heat/cold and other environmental conditions exist at an extreme level.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Purchaser's Name: _____

Purchaser's Address: _____

Model Number: _____ **Serial Number:** _____

Dealer Name: _____ **Date of Purchase:** / /

Dealer Address: _____

Invoice/Sales Docket no: _____

General Hints: To expedite service and prompt return of the equipment, please:

- Clearly describe the fault in detail
- Safely and securely pack the unit for transport
- Include your return address
- Provide proof of purchase date as outlined above

National Service Contacts:
AUTOBACS AUSTRALIA PTY LTD
Telephone: 1300 288 029
email: services@autobacs.com.au

