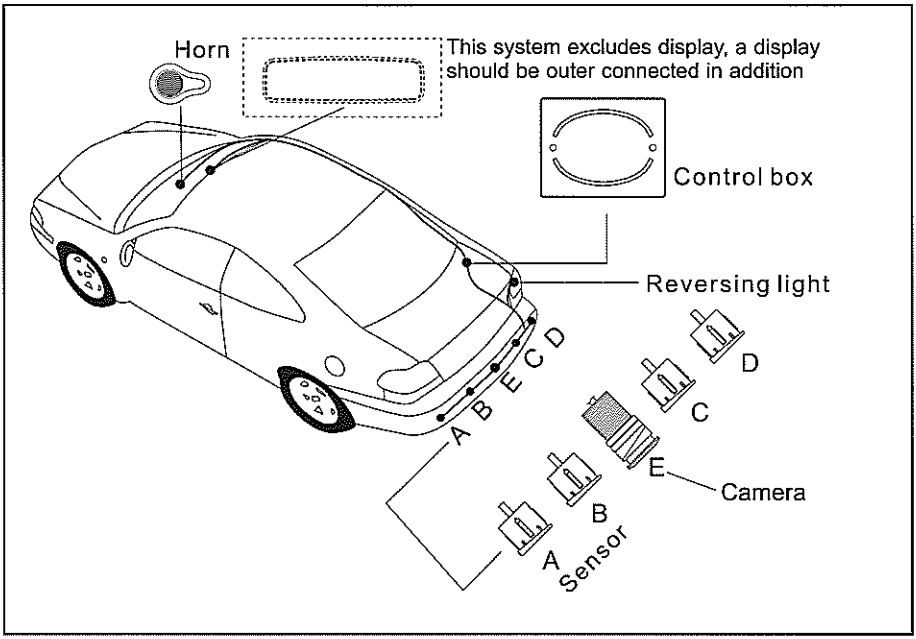
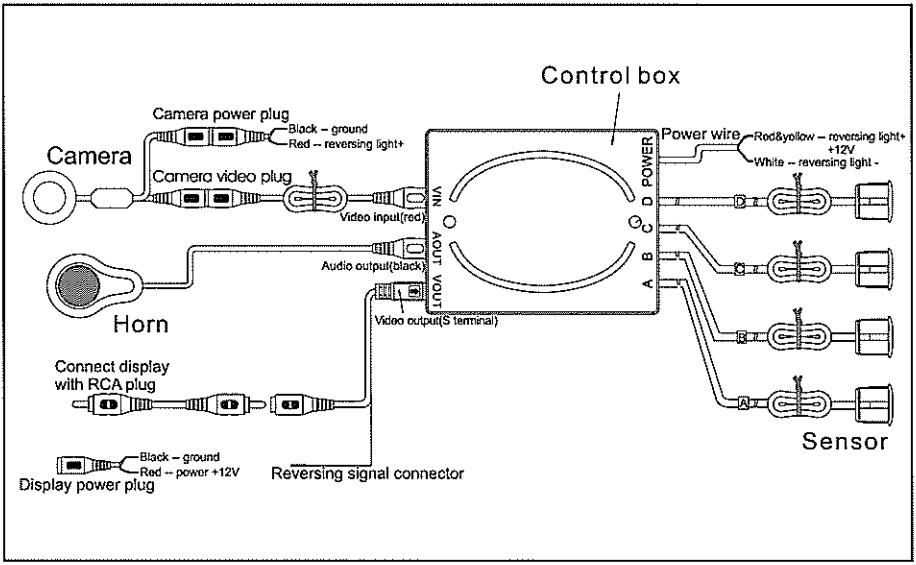
# H-091

## PARKING SENSOR SYSTEM

# USER'S MANUAL

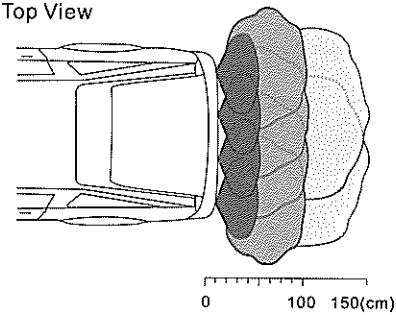
# GENERAL INSTALLATION DIAGRAM



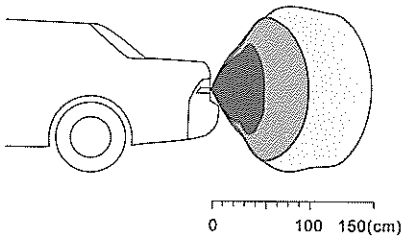



## DETECTING RANGE

Top View

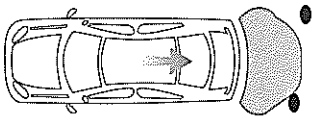



Side View

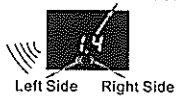



## DISPLAY STATUS

Safety Area 110-150cm

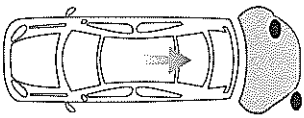


White Number




Dang……Dang……

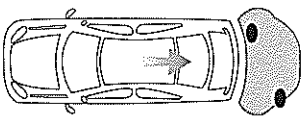
Alarm Area 50-100cm



White Number


Dang…Dang…Dang

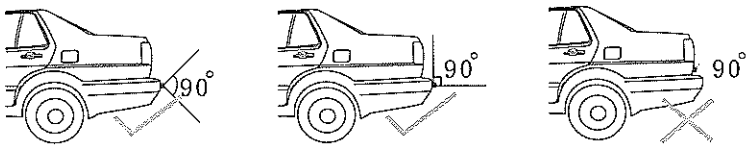
Danger Area 0-40cm



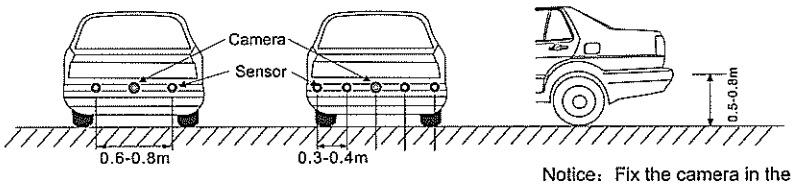
White Number


Dang……

# SENSOR&CAMERA INSTALLATION DIAGRAM




Be sure no other part of vehicle falls into the detecting range of sensors.

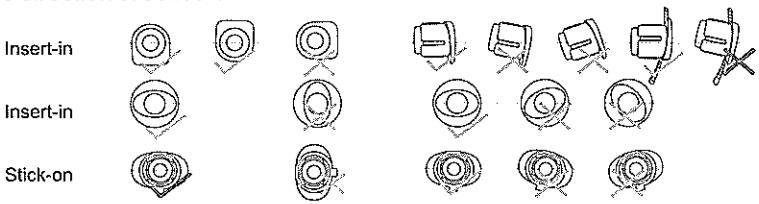



The best position for 2 sensors

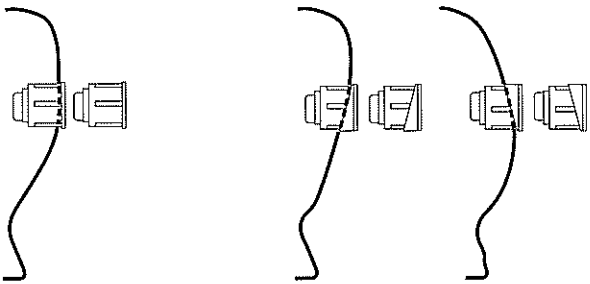
The best position for 4 sensors

Notice: Fix the camera in the middle of bumper on the same level with sensors.

The direction of sensors



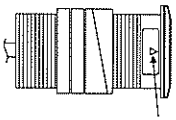

The direction of sensors



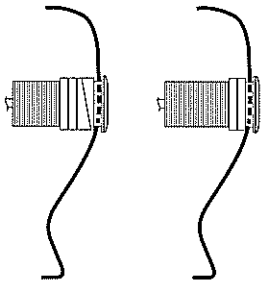
Vertical installation position to the ground

Sloping installation position to the ground

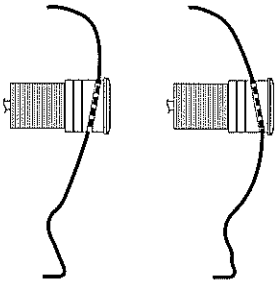
The direction of camera



The camera must be fixed with the triangle mark upward



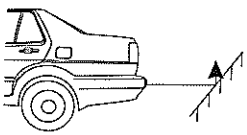
Vertical installation position to the ground



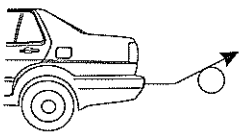
Sloping installation position to the ground

Stick-on and insert-in sensors in various shapes for options

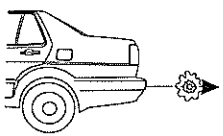
Smooth slope



Smooth round objects

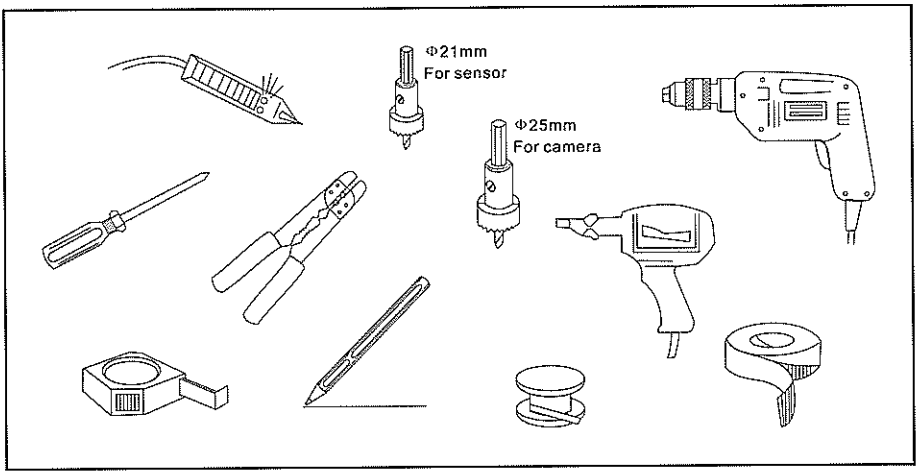


Objects absorbing wave, e.g. Cotton

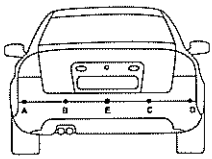


Objects hard to be detected

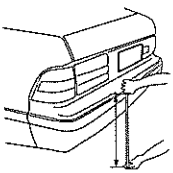
## INSTALLATION TOOLS



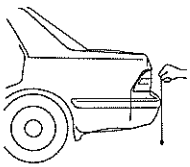

## 1. Advised position to install the sensors




A. 4 drilled holes (A,B,C,D) and camera hole(E) should be under the same line.

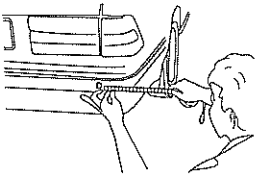


B. 0.5-0.8m vertically high to the Ground, 0.55m feet is recommended.

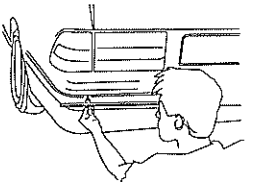


C. Vertical, tidy surface without metal components is preferred.

## 2. Select drilling position for sensor A & D

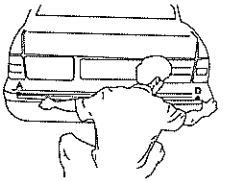


A. Choose suitable drilling position for A & D sensor with relevant mark.

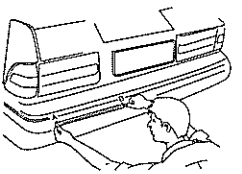


B. To perform the best detecting angle, select the position for A & D sensor with 8-13cm away from the side, 11cm is recommended, and 20° with the side.

## 3. Select drilling position for sensor&cmaera B,C and E

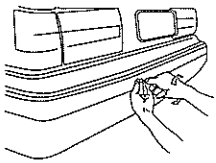


A. Measure the distance between sensor A and D, get the result "L".

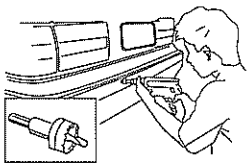


B. Mark sensor B ,C and E for every 1/4 "L" interval. (Camera E should be in the middle of the bumper)

## 4. Drilling

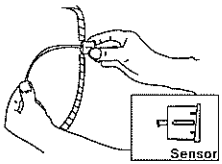


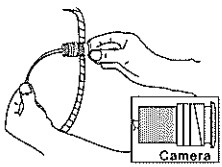
A. Firstly, use a small driller tip to locate.



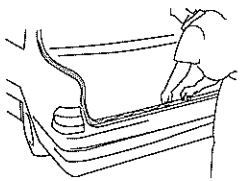
B. Drill with the original driller. (Φ 21mm dirller for sensor holes, Φ 25mm dirller for camera hole )

## 5. Sensor& Camera Installation



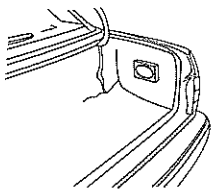




A. Insert the sensors and camera into the holes one by one and tighten them, the sensor with metal slice must be up and down fixed instead of right and left. The camera must be fixed with the triangle mark upward.



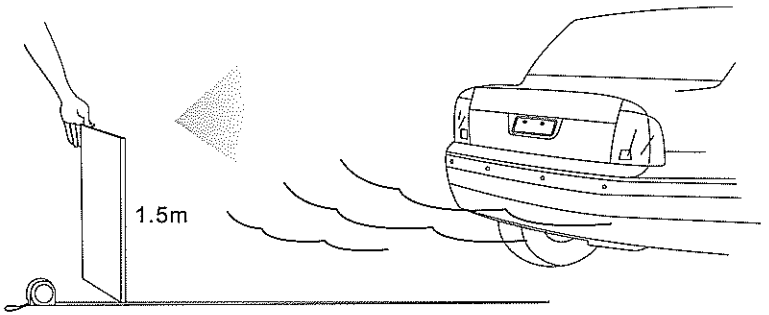
B. Hide the wires in good order according to various cars.

## 6. Control box Installation



Locate the control box in the boot, keep safe, cool, dry and away from shake or interference.

## 7. Sensor Detecting




# H-091 PARKING SENSOR SYSTEM

H-091 consists of ultrasonic sensors, camera and digital control box.(Besides these, a outer connected display with RCA plug is needed).The video signal is inputted into control box via VIN(Video Input)and processed by control box, then outputted to outer connected display with RCA plug via VOUT(Video Output). This system detects the distance between the car and back obstruction by ultrasonic sensors fixed at rear bumper of the car, and the display shows the back image via the camera fixed at the rear of the car. With the change of alarm sound, figure or simulation bars as well as the image, the driver could judge the distance to avoid accident.

## MAIN FEATURES

- One video input, one video output
- Automatic function switch
- Outer connected display with RCA plug
- Digital distance display
- Left/right obstruction display via simulation bars
- Ten-grade simulation bars for distance display
- "DangDang" alarm sound
- Stick-on/ insert-in sensors optional
- Various cameras available

## TECHNICAL SPECIFICATIONS

- Rated Voltage: DC 12V
- Operating Range: DC 9~16V
- Rated Current: 200~400mA
- Detecting Distance: 0.4~1.5m
- Ultrasonic Frequency: 40KHz
- Working Temperature −30~+70℃

## ALARM MODE

| Stage | Distance | Awareness | Alarm Sound | Digital Display | Bars |
|---|---|---|---|---|---|
| 1 | >1.5 | Safety Area | Silence | • | No Bars |
| 2 | 1.5~1.1M | Safety Area | Dang……Dang…… | 1.5~1.1M | 5to1 |
| 3 | 1.0~0.5M | Alarm Area | Dang…Dang…Dang | 1.0~0.5M | 9to6 |
| 4 | ≤0.4M | Danger Area | Dang…… | 0.4,0.0M | 10 |

## INSTALLATION STEPS

1. Choose right installation position for sensors
2. Select drilling position for sensor A & D
3. Select drilling position for sensor B & C
4. Locate the position and drill
5. Install the sensors and hide the wires
6. Install the control box
7. Connect the whole system according to the General Installation Diagram

## INSTALLATION AND TEST

1. Adjust the directions of sensors and axial orientation, neaten the wiring after installing the sensors.
2. Connect the red/yellow wire of control box to positive pole of reversing light, white wire to the negative, red power wire of camera to the positive pole of reversing light; (Ref: Installation Diagram)
3. Connect video wire following the General Installation Diagram;
4. Put the car into reverse gear, the rear camera signal enters control box and will be output via VOUT after superposing characters. Then there should be a image with a white dot on the display, indicating parking sensor entered normal detecting.

Test: a. If the display does not show any image, please check whether the polarity of the power is correct, the cables are correctly connected, the voltage is beyond regulated, or the plug on the display is well connected . b. If the display is in disorder , please exit and put the car into reverse gear again. If the problems still could not be solved, the control box could be deemed defective which needs a entire replacement.

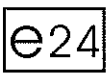
5. If a person stand right before the sensors within 1.0m, he/she should be detected normally.

Test: a. Insert one sensor into control box, if the horn gives continuous sound and show "0.0", please check whether it detected rear outshoot (such as registration mark, spare wheel, bumper etc.), the sensor is fixed too tight or near to some strong interference sources(such as exhaust pipe, other wires); b. If it shows distance figure on display without any obstruction around the sensor, it may detect the ground, please check the position and direction of sensor; c. If the problem still can not be removed, the whole system should be replaced.

Note: a. This display could be interchangeable, but the connection between the sensor and control box or the joint end is unique. b. The display program: It displays "0.0" and gives continuous sound when the system detects something in the distance range of 0.0~0.3m; the alarm will stop for 1 more second at the distance of 0.5m. Please pay attention to the above note while testing.

## NOTE

1. The car must be in power-off during the installation.
2. Its performance may be affected in following situation: heavy rain, gravel road, bumpy road sloping road and bush, very cold, hot or moist weather, or the sensor is covered by ice, mud, etc..
3. Switches among ultrasonic and electric wave, DC and AC may effect its performance.
4. The sensors should be installed appropriate loose or tight.
5. Its performance may be effected if the sensors are fixed on metallic bumper.
6. Avoid installing the digital control box in places of great interference, such as vent-pipe, wiring nearby.
7. Test the system to make sure it works normally before using
8. This system is a reversing aid and the manufacturer will take no responsibility for any accident after the kit is installed.




ISO 9001:2000 FM 78496
QS 9000:March 1998 FM 78495